



# KEYSTONE

DESIGNERS • MANUFACTURERS

STANDARDIZED ELECTRONIC COMPONENTS & HARDWARE

CAT. NO. 920



**SIR** ASSOCIATES

MANUFACTURERS REPRESENTATIVES  
288 Littleton Rd. 116 Cottage Grove Rd.  
Westford, MA 01886 Bloomfield, CT 06002  
508 - 692-2500 203 - 243-9343

**KEYSTONE ELECTRONICS CORP.**  
**31-07 20TH RD., ASTORIA, NY 11105-2017**  
**TEL: (718) 956-8900 • FAX 718-956-9040**

# NEW PRODUCTS FOR 1988



	<u>PAGE</u>
Spacers — Aluminum — (male/female)	35
Spacers — Flame Retardant	36
Finger/Fan Guards	40
Knobs — Military & Instrument	42, 43
Grommets/Bushings — Insulated	46
Hole Plugs	47
Cable Clamps — Metal	48
PC Screw Terminals	58
Solderless Terminals	60, 61, 62
Card Ejectors	62
LED Lens Caps	63
PC Board Guides	63

*MORE ABOUT KEYSTONE...SEE INSIDE BACK COVER*

**WE SHIP PRODUCTS...NOT PROMISES™**



# KEYSTONE



# TABLE OF CONTENTS

KEYSTONE



A	Page
ALLIGATOR CLIPS	17
<b>B</b>	
BANANA PLUGS & JACKS	20, 23
BATTERY HOLDERS	
Aluminum	4, 5
Clips	12, 13
Coin Cell (Lithium)	8, 9
Connectors	7, 11
Plugs	10
Printed Circuit	7
Series Connected	7
Steel	2, 3
Accessories	10
BINDING POSTS	23
BOARD GUIDES, P.C.	63
BRACKETS (Mounting)	41
BUMPERS, RUBBER/VINYL	46
BUSHINGS (Rivet, Clear and Threaded)	34-38
BUSHINGS, GROMMET	46
<b>C</b>	
CABLE CLAMPS (Nylon & Steel)	47, 48
CAPS, L.E.D. LENS	63
CAPTIVE SCREWS	38
CARD EJECTORS, P.C.	62
CASES	
Instrument & Meter	44
Relay & Module	33
CERAMIC STANDOFFS	36
CLIPS	
Alligator	17
Battery & Components	10, 12, 13
Fuse	30
CONNECTORS	
Battery Snap-ons	7, 11
Butt	62
Phono	22
CONTACTS (Pin & Socket)	64, 65, 72
COUPLINGS	38
CRIMP LUGS	59-61
<b>E</b>	
ENCLOSURES (See Housings)	
EYELETS	56
<b>F</b>	
FAN/FINGER GUARDS	40
FERRULES	39
FIBRE WASHERS (Flat & Shoulder)	45
FUSE CLIPS & HOLDERS	30, 31
<b>G</b>	
GROMMETS, RUBBER/NYLON	46
GUARDS, FAN/FINGER	40
<b>H</b>	
HANDLES	39
HEADERS	
Module	32
Plug-in	33
HINGED STANDOFFS	37
HOLE PLUGS, (Steel/Nylon)	47
HOUSINGS (For Relay & Module)	33
<b>I</b>	
I.C. SOCKET CONTACTS	65
INSULATING MATERIALS	
Blank Sheets, Pre-Punched	54, 55
Spacers & Washers	36, 45
INSTRUMENT CASES	44
INSTRUMENT KNOBS	42, 43
INSULATOR BOOTS	62

J	Page
JACKS	
Banana	20
Micro	65
Phono	22
Test	19
Tip	18
JACK SCREWS	35
JUMPER CABLES	16
<b>K</b>	
KITS	
Probe	44
Scope Probe	16
Spacer	37
Staking Tool	70
Terminal Board	54
Test Lead	15
Transistor Mounting	24, 25
KNOBS, INSTRUMENT	42, 43
<b>L</b>	
LEADS, TEST	14
L.E.D. LENS CAPS	63
LOCKNUTS	38
LUGS	
Crimp (Ring & Spade)	57, 59-61
Extruded	57
Lockwasher	59
Printed Circuit	13, 57
Quick Disconnect	57, 61
<b>M</b>	
MICA INSULATORS	29
MICRO PINS & JACKS	64, 65
<b>N</b>	
NUTS, MACHINED	38
<b>P</b>	
PANEL BEARINGS	38
PANELS & COVERS	44
PATCH CORDS	16
PHENOLIC SPACERS	36
PHONE TIPS	21
PINS (Micro, Socket & Wirewrap)	64, 65, 72
PLUGS	
Banana	20, 23
Battery	10
Hole	47
Micro	64
Phono	22
PLUG-IN HOUSINGS	33
PRE-PUNCHED BOARDS	54, 55
PRINTED CIRCUIT COMPONENTS	
Battery Holders	12
Board Guides	63
Card Ejectors	62
Fuse Clips	30, 31
Phono	22
Sockets	26-28
Terminals	13, 57, 58, 64, 65
Test Jacks	19
PROBES & PRODS	
Oscilloscope	16
Test & Phone	21
<b>Q</b>	
QUICK DISCONNECT COMPONENTS	
Boots	62
Connectors	57
Fuse Clips	30, 31
Lugs	57, 61
Terminals	57, 61
Terminal Boards	53

R	Page
RELAY COVERS & HEADERS	32, 33
RIVETS	56
RUBBER BUMPERS & GROMMETS	46, 47
<b>S</b>	
SCREWS	
Captive	38
Jack	35
Thumb	38
SHAFTLOCKS	38
SOCKET CONTACTS	65
SOCKETS	
Micro	65
Module	32
Phono	22
Transistors	24-28
SOLDERLESS TERMINALS	59-61
SPADE BOLTS	58
SPACERS (Aluminum, Brass, Nylon & Phenolic)	34-38
STANDOFFS (Aluminum, Brass, Ceramic, Nylon, Phenolic & Stainless)	34-38
<b>T</b>	
TERMINALS	
Extruded Lug	52
I.C. Socket	65
Lockwasher	59
Micro	64
Push-in	54, 72
Printed Circuit	13, 57, 58, 64
Quick Disconnect	13, 57, 58, 61
Screw	58
Spade	58
Turret (Rivet Type)	66-69
TERMINAL BOARDS	
Carrier	32
Extruded Lug	52
Feed-Thru	49-53
Kwik-Disconnect	53
Pre-Punched	54, 55
Readi-Made	49, 52
Scored	49
Screw Terminals	53
Strips	52, 53
Turret Terminals	49-52
TERMINAL STRIPS	
Miniature & Standard	51, 52
Screw Terminals	53
TEST LEADS & ACCESSORIES	14, 15
TEST SOCKETS	65
TIPS, JACKS & PRODS	18, 19, 21
THUMB SCREWS	38
TOOLS	
Crimper	62, 71
Hand Punch	70
Staking	70, 71
TRANSISTOR SOCKETS & HARDWARE	
Covers	25
Mica Insulators	29
Mounting Kits & Hardware	24, 25
Mounts Insulated	24
Printed Circuit	27
Snap-in	28
Subminiature	28
Sockets	24-28
<b>W</b>	
WASHERS	
Fibre (Flat & Shoulder)	45
Nylon (Flat & Shoulder)	45

All products unconditionally guaranteed against defects in material and workmanship.

We reserve the right to change specifications on any and all items shown in this catalog or any supplements without prior notice providing it will improve the quality, performance or appearance without changing the function of the item.

Copyright 1988 by Keystone Electronics Corp.  
Printed in U.S.A.

FEDERAL SUPPLY CODE  
FSCM  
91833



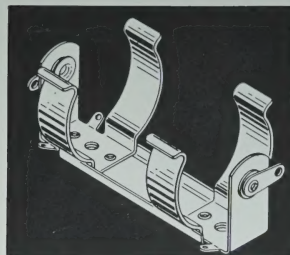
KEYSTONE

# ALL STEEL BATTERY HOLDERS

SEE PAGE 3 FOR MATERIAL SPECIFICATIONS AND DIMENSIONAL DRAWINGS

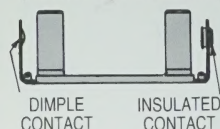
## RUGGED STEEL BATTERY HOLDERS

An important advance in design that has gained wide acceptance for commercial and military applications. Batteries are held under constant spring tension assuring low contact resistance. Retainer clips available to lock batteries in place which prevents shifting or loosening of batteries in holders. Recommended for use where shock or severe vibration is encountered. Special fabrication for more than four batteries or variation from standard stock parts can be assembled to meet your requirements. Prompt quotation rendered.

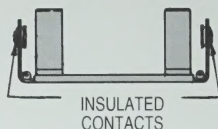


- CORROSION RESISTANT NICKEL PLATED
- STAINLESS STEEL CONTACTS
- MOISTURE PROOF RESIN IMPREGNATED, FIBRE INSULATING WASHERS
- IDEAL FOR NI-CAD ALKALINE, MERCURY, CARBON ZINC AND LITHIUM CELLS

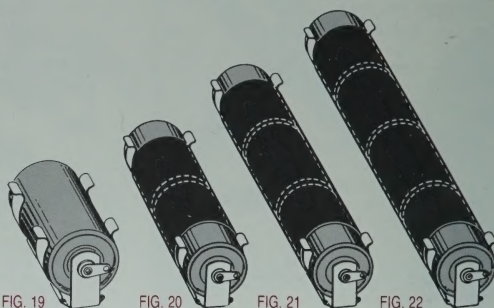
### 1100 SERIES (GROUNDED ONE SIDE)



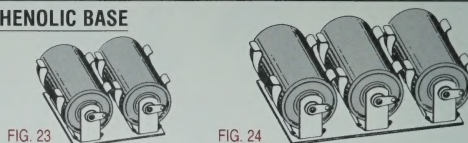
### 2100 SERIES (FULLY INSULATED)



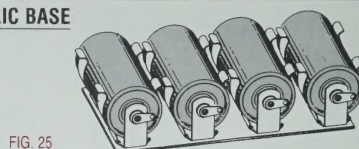
INSULATOR TUBES SUPPLIED FOR 2-3-4 CELLS END TO END



### PHENOLIC BASE



### PHENOLIC BASE

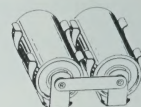


### MODIFICATIONS AVAILABLE

Variety of stock parts permits fast delivery on special requirements. Use our engineering service for your special custom-built holders.

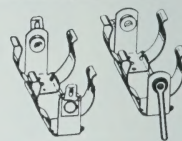
### JUMPERS

Jumpers permit cost cutting and the elimination of wiring.



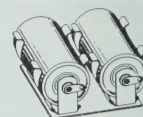
### SPECIAL LUGS

Printed Circuit, Solderless Connections and Quick Disconnect Lugs Available on special order.



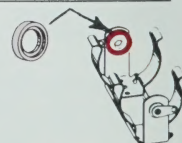
### MULTIPLE UNITS

Multiple Units with Jumpers, Special Lugs and Polarized Contacts.



### POLARIZED CONTACTS

Polarized Contacts insure the proper insertion of Batteries.



1100 SERIES		2100 SERIES		BATTERY CROSS REFERENCE			
ONE CONTACT INSULATED		ALL CONTACTS INSULATED		ALL BATTERIES LISTED WITHIN BOXES ARE IN THE SAME SIZE GROUP			
CAT. NO.	CAT. NO.	FIG. NO.	HOLDS NO. OF CELLS	EVEREADY	DURACELL	RAY-O-VAC	NEDA
<b>"AA" CELL HOLDERS</b>				( BATTERY SIZE .531 .565 O.D. × 1.906 1.988 H)			
1139	2139	19	1	E9, E12, E12N, CH15, HS15, H91, HS91, E133, E133N, E177, CH500, 505, 523, 1015, 1215	ZM9, RM12, RM12R, NC15AA, M15F, M15AA, PX21, TR133, TR133R, TR177, M505, ID1500, MN1500,	5AA, 15, 7AA, RPX21, WM40, 221, 615, 715, 815	15, 15A, 15C, 15D, 15F, 15M, 15NC, 221, 1101M, 1113M, 1306AP, 1306M, 1314M, 1606M
1189	2189	20	2				
1191	2191	21	3				
1194	2194	22	4				
<b>"C" CELL HOLDERS</b>				( BATTERY SIZE .875 1.125 O.D. × 1.875 1.969 H)			
1173	2173	19	1	CH35, HS35, E93, HS93, E286, 935, 1235	M14F, M14HD, NC14C, TR286, ID1400, MN1400	1C, 4C, WM15, 614, 814	14A, 14C, 14D, 14F, 14NC, 1600M
1185	2185	20	2				
1195	2195	21	3				
1198	2198	22	4				
<b>"D" CELL HOLDERS</b>				( BATTERY SIZE 1.187 1.375 O.D. × 2.312 2.412 H)			
1175	2175	19	1	E42N, CH50, HS50, E95, HS95, E289, 950, 1250	M13F, NC13D, RM42R, S42, M13HD, TR289, ID1300, MN1300	2D, 3D, 6D, WM30, 613, 813, IND813	13A, 13C, 13D, 13F, 13NC, 1115M, 1810M
1186	2186	20	2				
1199	2199	21	3				
1162	2162	22	4				

\*CLIPS MOUNTED ON PHENOLIC 1/16" THICK



# STEEL BATTERY HOLDERS

KEYSTONE



## MATERIAL SPECIFICATIONS

**CLIPS:** SAE 1050 Corrosion Resistant Steel  
Heat treated to spring temper. Nickel Plated.

**CONTACT EYELETS:** Stainless Steel

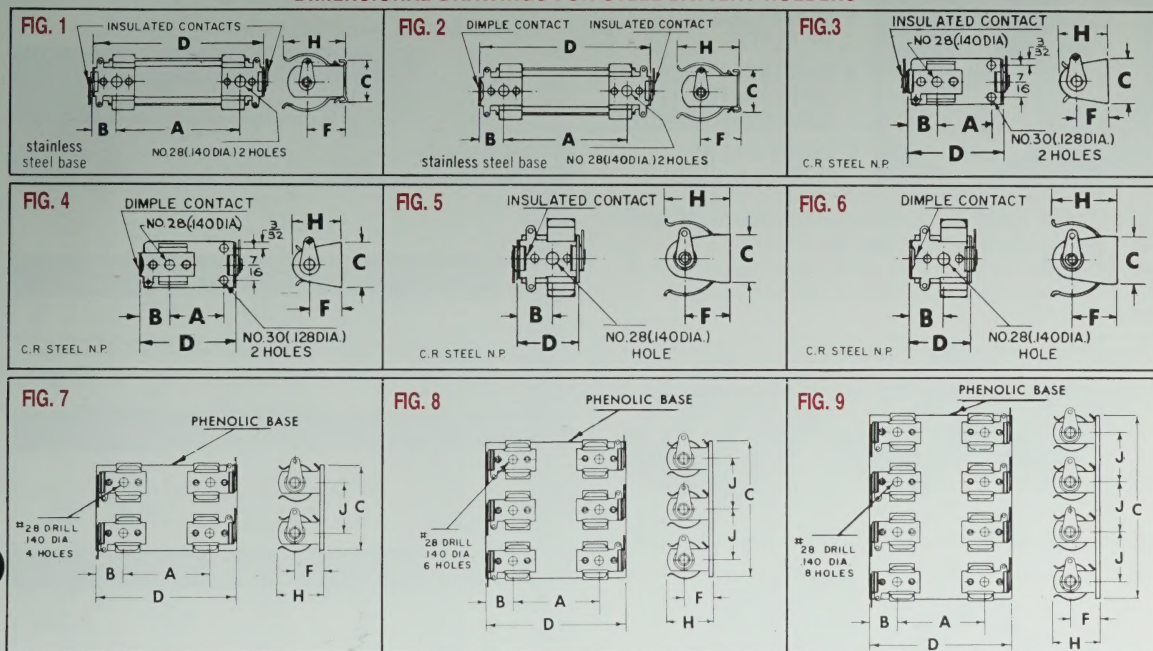
**INSULATING WASHERS:** Moisture proof, resin impregnated fibre.

**TERMINAL LUGS:** Brass, tin plated, per QQ 613A

**PHENOLIC BASE:** Type PBE, Per MIL-P-3115C

**BASE:** For added support, ribbed stainless steel

## DIMENSIONAL DRAWINGS FOR STEEL BATTERY HOLDERS

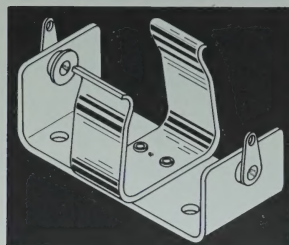


CAT. NO.	FIG.	.005 A	.015 B	.010 C	.015 D	.010 F	.020 H	CAT. NO.	FIG.	.005 A	.015 B	.010 C	.015 D	.010 F	.020 H	.005 J
1101	4	.281	.391	.625	.812	.437	.656	2116	3	.718	.391	.625	1.281	.437	.656	—
1104	6	—	.468	.625	.890	.750	1.281	2125	1	3.906	.391	.687	4.687	.437	.656	—
1109	2	1.156	.391	.687	1.937	.437	.656	2132	3	.937	.391	.625	1.484	.437	.656	—
1110	2	1.562	.391	.687	2.343	.437	.656	2134	1	2.000	.391	.687	2.781	.437	.656	—
1113	4	.484	.391	.625	1.031	.437	.656	2135	1	2.625	.391	.687	3.406	.437	.656	—
1114	4	.671	.391	.625	1.218	.437	.656	2139	1	1.343	.391	.687	2.125	.437	.656	—
1116	4	.734	.391	.625	1.281	.437	.656	2140	7	1.343	.406	1.250	2.125	.437	.656	.750
1125	2	3.906	.391	.687	4.687	.437	.656	2142	1	1.265	.391	.687	2.047	.437	.656	—
1132	4	.937	.391	.625	1.484	.437	.656	2144	1	2.000	.391	.687	2.781	.625	1.000	—
1134	2	2.000	.391	.687	2.781	.437	.656	2145	3	.828	.391	.625	1.312	.437	.656	—
1135	2	2.625	.391	.687	3.406	.437	.656	2162	1	8.687	.468	.687	9.625	.796	1.281	—
1139	2	1.343	.391	.687	2.125	.437	.656	2171	8	1.343	.406	2.000	2.125	.437	.656	.750
1142	2	1.265	.391	.687	2.047	.437	.656	2173	1	1.343	.391	.687	2.125	.625	1.000	—
1144	2	2.000	.391	.687	2.781	.625	1.000	2174	7	1.343	.356	1.750	2.062	.625	1.000	1.187
1145	4	.828	.391	.625	1.312	.437	.656	2175	1	1.625	.468	.687	2.562	.796	1.281	—
1162	2	8.687	.468	.687	9.625	.796	1.281	2176	7	1.625	.468	2.125	2.562	.796	1.281	1.562
1173	2	1.343	.391	.687	2.125	.625	1.000	2182	9	1.343	.406	2.750	2.125	.437	.656	.750
1175	2	1.625	.468	.687	2.562	.796	1.281	2185	1	3.312	.391	.687	4.093	.625	1.000	—
1185	2	3.312	.391	.687	4.093	.625	1.032	2186	1	4.000	.468	.687	4.937	.796	1.281	—
1186	2	4.000	.468	.687	4.937	.796	1.281	2187	8	1.343	.356	2.937	2.062	.625	1.000	1.187
1189	2	3.312	.391	.687	4.093	.437	.656	2188	9	1.343	.356	4.125	2.062	.625	1.000	1.187
1191	2	5.218	.391	.687	6.000	.437	.656	2189	1	3.312	.391	.687	4.093	.437	.656	—
1194	2	7.205	.391	.687	7.985	.437	.656	2190	8	1.625	.468	3.687	2.562	.796	1.281	1.562
1195	2	5.156	.391	.687	5.937	.625	1.000	2191	1	5.250	.391	.687	6.030	.437	.656	—
1198	2	7.125	.391	.687	7.906	.625	1.000	2192	9	1.625	.468	5.250	2.562	.796	1.281	1.562
1199	2	6.343	.468	.687	7.281	.796	1.281	2194	1	7.230	.391	.687	8.010	.437	.656	—
2101	3	.281	.391	.625	.812	.437	.656	2195	1	5.156	.391	.687	5.937	.625	1.000	—
2104	5	—	.468	.625	.890	.750	1.281	2198	1	7.125	.391	.687	7.906	.625	1.000	—
2109	1	1.156	.391	.687	1.937	.437	.656	2199	1	6.343	.468	.687	7.281	.796	1.281	—
2110	1	1.562	.391	.687	2.343	.437	.656									
2113	3	.484	.391	.625	1.031	.437	.656									
2114	3	.671	.391	.625	1.218	.437	.656									

Dimensions B,D,F,H should be used for reference only.



A standard line of battery holders available for immediate shipment from stock. Low cost, lightweight and sturdily constructed of quality materials. Good electrical contact, low leakage current and snap-fit clips are the outstanding features.



- BRASS EYELETS  
NICKEL PLATED
- BRASS LUGS  
TIN PLATED
- MOISTURE PROOF, RESIN  
IMPREGNATED, FIBRE  
INSULATING WASHERS
- FRAME & CLIP  
2024-T4 ALUMINUM

**SPECIAL LUGS:** Printed Circuit, Solderless Connections and Quick Disconnect Lugs Available on special order.

**MODIFICATIONS:** We welcome the opportunity to quote on variations of standard items. Use our engineering service for your special custom-built holders.

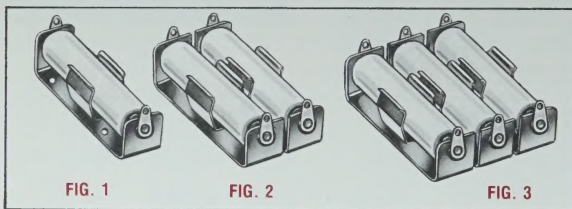


FIG. 1

FIG. 2

FIG. 3

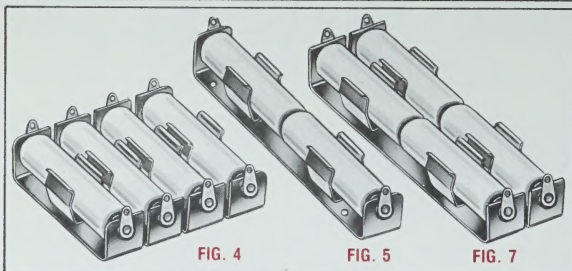


FIG. 4

FIG. 5

FIG. 7

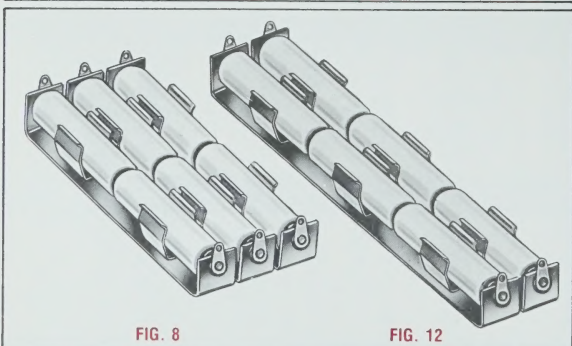


FIG. 8

FIG. 12

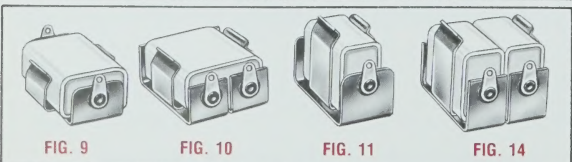


FIG. 9

FIG. 10

FIG. 11

FIG. 14

**IDEAL FOR ALKALINE, CARBON, ZINC,  
MERCURY, NI-CAD, AND LITHIUM CELLS**

## DIMENSIONAL DRAWINGS ON THE FOLLOWING PAGE

CAT. No.	HOLDS NO. OF CELLS	FIG.	BATTERY CROSS REFERENCE			
			ALL BATTERIES LISTED WITHIN BOXES ARE IN THE SAME SIZE GROUP			
			EVEREADY	DURACELL	RAY-O-VAC	NEDA
<b>"AAA" CELL HOLDERS</b>			BATTERY SIZE .375 .468	O.D. × 1.673 1.752	H)	
137	1	1	E92, 912	M24F, MN2400	400, 410, 824	24A, 24F, 24P
138	2	2				
169	3	3				
170	4	4				
<b>"AA" CELL HOLDERS</b>			BATTERY SIZE .531 .565	O.D. × 1.906 1.988	H)	
139	1	1	E9, E12, E12N, CH15, HS15, E91, HS91, E133, E133N	ZM9, RM12, RM12R, NC153A, M15F, M15HD, PX21, TR133, TR133R, TR177, M505, ID1500, MN1500	5AA, 7AA, 15, RPK21, WM40, 221, 615, 715, 815	15, 15A, 15C, 15D, 15F, 15M, 15NC, 221, 1101M, 1113M, 1306AP, 1306M, 1314M, 1606M
140	2	2				
171	3	3				
182	4	4	E177, CH500, 505, 523, 1015, 1215			
189	2	5				
192	4	7				
193	6	8				
<b>"C" CELL HOLDERS</b>			BATTERY SIZE .875 1.125	O.D. × 1.875 1.969	H)	
173	1	1	CH35, HS35, E93, HS93, E286, 935, 1235	M14F, 14HD, NC14C, TR286, ID1400, MN1400	1C, 4C, WM15, 614, 814	14A, 14C, 14D, 14F, 14NC, 1600M
174	2	2*				
187	3	3				
185	2	5				
196	4	7*				
197	6	8				
<b>"D" CELL HOLDERS</b>			BATTERY SIZE 1.187 1.375	O.D. × 2.312 2.412	H)	
175	1	1	E42N, CH50, HS50, E95, HS95, E289, 950, 1250	M13F, NC13D, RM42R, S42 M13HD, TR289, ID1300, MN1300	2D, 3D, 6D, WM10, WM30, 613, 813, IND813	13A, 13C, 13D, 13F, 13NC, 1115M, 1810M
176	2	2*				
190	3	3				
186	2	5				
200	4	7*				
201	6	8				
205	6	12*				
<b>"N" CELL HOLDERS</b>			BATTERY SIZE .375 .468	O.D. × 1.110 1.189	H)	
154	1	1	E90, CH150, E340E, E401E, EP401E, E401N	MP401H, RM401H, RM401R, M910F, MN910H, MN1900	RN, R401, RP401, 716, 810	910A, 910F, 910M, 1117M, 1118M
155	2	2				
156	3	3				
<b>"9 VOLT" BATTERY HOLDERS</b>						
139B	1	1	206	M1611	—	1611
173P	1	1	226	—	—	1600
203P	1	10	CH22, HS22, E146X, 216, 522, 1222, E303396	TR146X, ID146X, NC169V, M1604, M1604HD, ID1604, MN1604, 303396	A1604, D1604, 1604, NC1604	1604, 1604A, 1604C, 1604D, 1604M, 1604NC, 1619M
1290	REF. PAGE 7					
1291						
<b>"15 VOLT" BATTERY HOLDERS</b>						
163	1	9	417	—	—	224
161	1	9	411	—	—	208
166	1	11	—	—	—	—
167	2	14	—	—	—	—
225	1	1	504	M504	220	220
226	2	2	—	—	—	—
<b>"22½ VOLT" BATTERY HOLDERS</b>						
139	1	1	505	M505	221	221
168	1	9	420	—	—	225
177	1	11	412	M215	215	215
178	2	14	—	—	—	—
<b>"30 VOLT" BATTERY HOLDERS</b>						
183	1	11	413	—	—	210
184	2	14	—	—	—	—

\* "C" Cell Holders—Dual #97 clips used.

"D" Cell Holders—Dual #98 clips used.



# ALUMINUM BATTERY HOLDERS

SEE NEXT PAGE FOR NUMERICAL LISTING OF MERCURY CELLS

KEYSTONE



## MATERIAL SPECIFICATIONS

**INSULATING WASHERS:** Moisture proof, resin impregnated fibre.

**TERMINAL LUG:** Brass, tin plate

**FRAME AND CLIPS:** Aluminum per QQ-A-362

**CONTACT EYELETS:** Brass, nickel plated

DIMENSIONS ARE FOR REFERENCE ONLY

FIG. 1

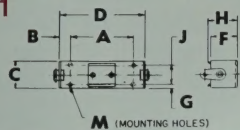


FIG. 2

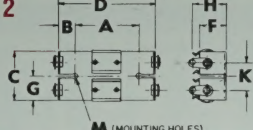


FIG. 3

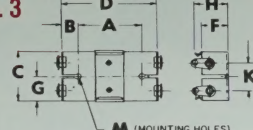


FIG. 4

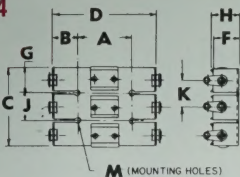


FIG. 5

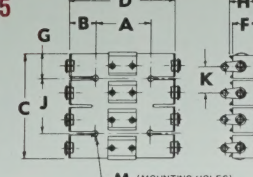


FIG. 6

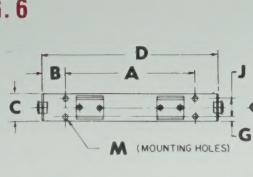


FIG. 7

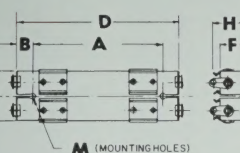


FIG. 8

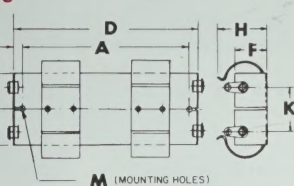


FIG. 9

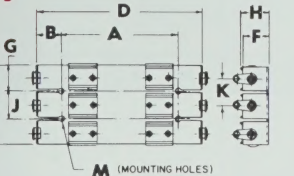
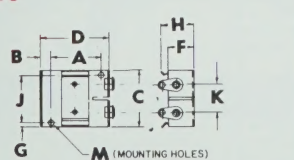


FIG. 10



CAT. NO.	FIG.	±.010 A	±.015 B	±.010 C	±.015 D	±.010 F	±.010 G	±.015 H	±.005 J	±.010 K	MTG. HOLES M ± .003
109	1	1.500	.218	.625	1.937	.609	.109	.625	.406	—	4*30 (.128 Dia)
110	1	1.500	.437	.625	2.374	.625	.109	.625	.406	—	4*30 (.128 Dia)
132	1	1.125	.171	.625	1.468	.640	.093	.625	.437	—	4*34 (.111 Dia)
134	1	1.812	.484	.625	2.781	.609	.093	.625	.437	—	4*34 (.111 Dia)
135	6	2.500	.464	.625	3.430	.610	.093	.625	.437	—	4*30 (.128 Dia)
137	1	1.500	.218	.437	1.915	.468	.093	.484	.250	—	2*34 (.111 Dia)
138	2	.875	.531	.812	1.915	.468	.406	.484	—	.437	2*28 (.140 Dia)
139	1	1.500	.312	.625	2.140	.625	.109	.580	.406	—	4*34 (.111 Dia)
140	2	1.218	.461	1.125	2.140	.625	.562	.625	—	.625	2*28 (.140 Dia)
154	1	.906	.242	.437	1.343	.468	.093	.531	.250	—	2*34 (.111 Dia)
155	2	.875	.245	.937	1.343	.484	.468	.531	—	.500	2*34 (.111 Dia)
156	4	.875	.257	1.500	1.343	.475	.468	.531	.562	.531	4*34 (.111 Dia)
157	10	1.125	.218	1.250	1.562	.578	.109	.718	1.032	.593	2*34 (.111 Dia)
160	1	3.500	.406	1.000	4.312	.960	.141	1.218	.718	—	2*28 (.140 Dia)
163	1	1.125	.312	1.000	1.750	.687	.141	1.218	.718	—	2*28 (.140 Dia)
164	1	1.625	.402	1.000	2.430	.687	.125	1.218	.750	—	2*28 (.140 Dia)
165	1	2.187	.390	1.000	2.968	.687	.141	1.218	.718	—	2*28 (.140 Dia)
166	1	1.000	.312	.750	1.625	.768	.093	1.156	.562	—	4*28 (.140 Dia)
167	3	1.000	.312	1.125	1.593	.750	.562	1.264	—	.593	2*28 (.140 Dia)
168	1	1.500	.377	.750	2.275	.718	.125	.937	.500	—	4*28 (.140 Dia)
169	4	.875	.531	1.250	1.915	.468	.406	.484	.437	.437	4*28 (.140 Dia)
170	5	.875	.531	1.687	1.915	.468	.406	.484	.875	.437	4*28 (.140 Dia)
171	4	1.218	.461	1.750	2.140	.625	.562	.625	.625	.625	4*28 (.140 Dia)
173	1	1.500	.296	.750	2.093	.781	.156	.953	.437	—	4*28 (.140 Dia)
174	3	1.750	.172	1.625	2.093	.781	.812	1.105	—	1.000	2*28 (.140 Dia)
175	1	1.750	.406	1.000	2.562	.937	.125	1.218	.750	—	4*30 (.128 Dia)
176	3	2.093	.248	2.062	2.578	.937	1.030	1.437	—	1.312	2*28 (.140 Dia)
177	1	1.500	.312	.750	2.125	.781	.156	1.156	.437	—	4*28 (.140 Dia)
178	3	1.218	.453	1.125	2.215	.781	.562	1.218	—	.625	2*28 (.140 Dia)
179	1	.937	.250	1.000	1.425	.930	.125	1.218	.750	—	4*30 (.128 Dia)
182	5	1.218	.461	2.656	2.140	.625	.609	.625	1.437	.718	4*28 (.140 Dia)
183	1	1.750	.445	.750	2.687	.812	.093	1.156	.562	—	4*34 (.111 Dia)
184	3	1.812	.414	1.125	2.640	.812	.562	1.218	—	.625	2*28 (.140 Dia)
185	6	3.187	.419	.750	4.025	.812	.125	.953	.500	—	4*28 (.140 Dia)
186	6	4.125	.370	1.000	4.865	.968	.156	1.218	.687	—	4*30 (.128 Dia)
187	4	1.250	.435	2.840	2.093	.781	.812	.953	1.125	1.125	4*28 (.140 Dia)
189	6	3.000	.538	.625	4.075	.625	.093	.625	.437	—	4*30 (.128 Dia)
190	4	1.937	.321	3.375	2.578	.968	1.125	1.218	1.125	1.343	4*28 (.140 Dia)
192	7	3.093	.542	1.125	4.093	.625	.593	.625	—	.625	2*28 (.140 Dia)
193	9	3.125	.484	1.750	4.075	.625	.562	.625	.625	.625	4*28 (.140 Dia)
196	8	3.187	.419	1.625	4.025	.781	.812	1.125	—	1.000	2*28 (.140 Dia)
197	9	3.187	.419	2.875	4.025	.812	.937	.968	1.000	1.171	4*28 (.140 Dia)
200	8	4.375	.245	2.062	4.865	.968	1.032	1.468	—	1.312	2*28 (.140 Dia)
201	9	4.275	.245	3.375	4.865	.968	1.125	1.218	1.125	1.343	4*28 (.140 Dia)
203P	10	1.375	.312	1.125	2.000	.547	.125	.793	.875	.500	4*30 (.128 Dia)
205	8	6.812	.250	2.062	7.230	.937	1.030	1.437	—	1.312	4*28 (.140 Dia)
225	1	1.125	.226	.625	1.578	.609	.093	.625	.437	—	4*34 (.111 Dia)
226	2	.875	.351	1.125	1.578	.609	.562	.625	—	.625	2*28 (.140 Dia)
1290	10	1.375	.218	1.185	1.890	.562	.125	.718	.875	.500	4*30 (.128 Dia)
1291	10	1.375	.218	1.185	1.890	.562	.125	.718	.875	.500	4*30 (.128 Dia)





KEYSTONE

# MERCURY BATTERY HOLDERS

NOTE: HOLDERS FOR BATTERY TYPES NOT SHOWN CAN BE MANUFACTURED TO SUIT YOUR REQUIREMENTS  
SEE PAGES 3 AND 5 FOR MATERIAL SPECIFICATIONS AND DIMENSIONAL DRAWINGS

## ALUMINUM



FIG. 1

## ALUMINUM



FIG. 5

## PHOS. BRONZE SPRING PHENOLIC BASE



FIG. 13

## ALL STEEL

ONE CONTACT INSULATED

ALL CONTACTS INSULATED



FIG. 15



FIG. 16

## PHOS. BRONZE SPRING PHENOLIC BASE



FIG. 17



FIG. 18

## ALL STEEL

ONE CONTACT INSULATED

ALL CONTACTS INSULATED



FIG. 19



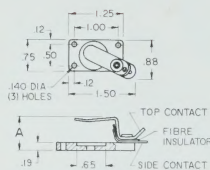
FIG. 20

MERCURY BATTERY CROSS REFERENCE				ALUMINUM AND PHENOLIC BASE HOLDERS		ALL STEEL HOLDERS			
DURACELL	EVEREADY	NEDA	SIZE O.D. x H.	CAT. NO.	FIG.	ONE CONTACT INSULATED		ALL CONTACTS INSULATED	
						CAT. NO.	FIG.	CAT. NO.	FIG.
PX1	EPX1	1110MP	.63 x .64	101	13	1101	15	2101	16
RM1R	E1	1100M	.63 x .64	101	13	1101	15	2101	16
RM4R	E4	1112M	1.19 x .66	104	13	1104	15	2104	16
ZM9	E9	15M	.56 x 1.97	139	1	1139	19	2139	20
RM12	E12	1101M	.63 x 1.96	139	1	1139	19	2139	20
RM12R	E12N	1113M	.63 x 1.96	139	1	1139	19	2139	20
PX13	EPX13	1114MP	.61 x .24	117	17	—	—	—	—
RM42R	E42N	1115M	1.19 x 2.39	175	1	1175	19	2175	20
TR115R	—	1504M	.66 x 1.30	132	1	1132	15	2132	16
TR126	E126	1611M	.72 x 2.00	139B	1	—	—	—	—
TR132H	E132	1200M	.66 x 1.28	132	1	1132	15	2132	16
TR132R	E132N	1203M	.66 x 1.28	132	1	1132	15	2132	16
TR133	E133	1306M	.66 x 1.93	139B	1	—	—	—	—
TR133R	E133N	1314M	.66 x 1.93	139B	1	—	—	—	—
TR134	E134	1408M	.66 x 2.11	134	1	1134	19	2134	20
TR134R	E134N	1409M	.66 x 2.11	134	1	1134	19	2134	20
TR135R	E135N	1505M	.66 x 3.22	135	5	1135	19	2135	20
TR136	E136	1615M	.66 x 3.87	189	5	1189	19	2189	20
TR163	—	1305M	.66 x 1.29	132	1	1132	15	2132	16
TR164	E164	1404M	.66 x 1.34	109	1	1109	19	2109	20
TR164R	E164N	1410M	.66 x 1.34	109	1	1109	19	2109	20
TR165	E165	1500M	.66 x 2.15	110	1	1110	19	2110	20
TR175	EP175	1502MD	.50 x 1.03	154*	1	—	—	—	—
TR177	E177	1606M	.50 x 1.44	—	—	1142	19	2142	20
D343	343	1154M	.46 x 1.4	111	18	—	—	—	—
RM400R	E400N	1116M	.46 x 1.3	111	18	—	—	—	—
MP401	E401	910M	.45 x 1.14	154*	1	—	—	—	—
RM401H	E401E	910M	.46 x 1.13	154*	1	—	—	—	—
RM401R	E401N	1117M	.46 x 1.13	154*	1	—	—	—	—
MP401H	EP401E	1118M	.46 x 1.13	154*	1	—	—	—	—
RM601R	E601	1121M	.63 x 1.14	—	—	1116	15	2116	20
RM625R	E625	1123M	.61 x .24	117	17	—	—	—	—
PX625	EPX625	1124MP	.61 x .24	117	17	—	—	—	—
RM630H	E630	1104M	.61 x .24	126	18	—	—	—	—
RM640	E640	1105M	.63 x .44	118	13	—	—	—	—
PX640	EPX640	1126MP	.63 x .44	118	13	—	—	—	—
RM675H	E675E	1127M	.46 x .21	127	18	—	—	—	—
MP675H	EP675E	1127MD	.46 x .21	127	18	—	—	—	—
PX675	EPX675	1127MP	.46 x .21	127	18	—	—	—	—

\*Available only in Aluminum

## DIMENSIONAL DRAWINGS FOR PHENOLIC BASE HOLDERS

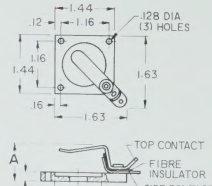
Cat. No. 101  
A = 3/4"



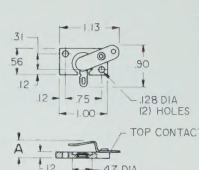
Cat. No. 118  
A = 5/16"

Cat. No. 104

A = 1 1/16"



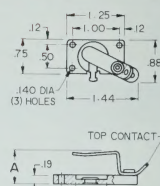
Cat. No. 111  
A = 1/4"



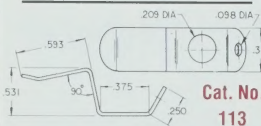
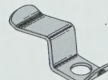
Cat. No. 127  
A = 5/16"

Cat. No. 126

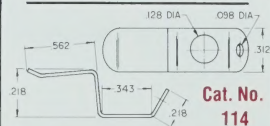
A = 1 1/16"



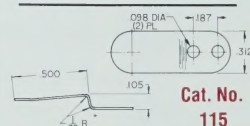
## BATTERY CONTACT SPRINGS



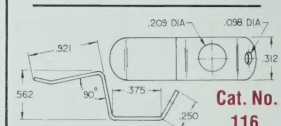
Cat. No.  
113



Cat. No.  
114



Cat. No.  
115



Cat. No.  
116



# BATTERY HOLDER CLIPS AND ACCESSORIES

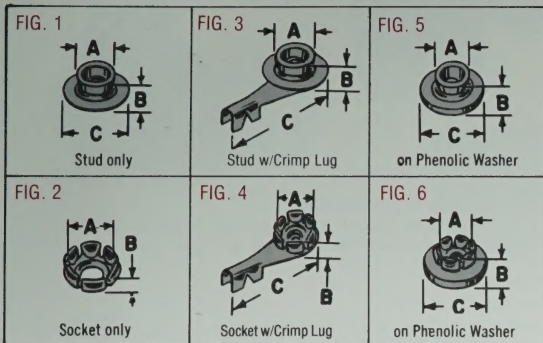
KEYSTONE



## BATTERY SNAP-ONS (Miniature and Standard)

001 uses for most electronic applications requiring a quick connect and disconnect of circuit. Commonly used for transistor or regular Batteries designed for snap fasteners. Ideal for temporary or permanent means of connecting without soldering. Can be cascaded together for multiple connections.

Dimensions for reference only.

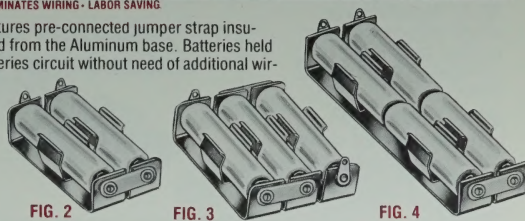


CAT. NO.	Fig.	A	B	C	Description
261	1	.225	.135	.312	Jr. Stud only - .093 hole
262	1	.283	.143	.425	Sr. Stud only - .125 hole
269	2	.205	.156	-	Jr. Socket only - .093 hole
270	2	.265	.156	-	Sr. Socket only - .125 hole
263	3	.225	.170	.790	Jr. Stud w/ Lug
264	3	.283	.185	.840	Sr. Stud w/ Lug
271	4	.205	.200	.790	Jr. Socket w/ Lug
272	4	.265	.185	.835	Sr. Socket w/ Lug
265	5	.225	.205	.500	Jr. Stud on Phenolic Washer
266	6	.205	.205	.500	Jr. Socket on Phenolic Washer
273	5	.283	.200	.500	Sr. Stud on Phenolic Washer
274	6	.265	.225	.500	Sr. Socket on Phenolic Washer

## ALUMINUM BATTERY HOLDERS CONNECTED IN SERIES

• ELIMINATES WIRING • LABOR SAVING

Features pre-connected jumper strap insulated from the Aluminum base. Batteries held in series circuit without need of additional wiring.

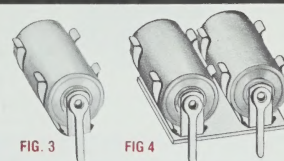
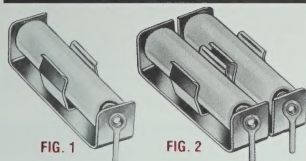


CAT. NO.	HOLDS NO. OF CELLS	FIG. NO.	BATTERY CROSS REFERENCE All Batteries listed within boxes are in the same size group			
			EVEREADY	DURACELL	RAY-O-VAC	NEDA
"AA" CELL HOLDERS			( BATTERY SIZE $\frac{.531}{.565}$ O.D. $\times$ $\frac{1.906}{1.988}$ H )			
146	2	2	E9, E12, E12N, CH15, E91, HS91, E133, E133N, E177, CH500, 505, 523, 1015, 1215, HS15	ZM9, RM12, RM12R, NC15AA, M15F, M15HD, PX21, TR133, TR133R, TR177, M505, ID1500, MN1500	5AA, 7AA, 15, RPX21, WM40, 221, 615, 715, 815,	15, 15A, 15C, 15D, 15F, 15M, 15NC, 221, 1101M, 1113M, 1306AP, 1306M, 1314M, 1606M,
147	3	3				
148	4	4				
"C" CELL HOLDERS			( BATTERY SIZE $\frac{.875}{1.125}$ O.D. $\times$ $\frac{1.875}{1.969}$ H )			
149	2	2	CH35, HS35, E93, HS93, E286, 935, 1235,	M14F, 14HD, NC14C, TR286, ID1400, MN1400	1C, 4C, WM15, 614, 814,	14A, 14C, 14D, 14NC, 1600M, 14F
150	3	3				
151	4	4				
"D" CELL HOLDERS			( BATTERY SIZE $\frac{1.187}{1.375}$ O.D. $\times$ $\frac{2.312}{2.412}$ H )			
152	2	2	E42N, CH50, HS50, E95, HS95, E289, 950, 1250	M13F, NC13D, RM42R, S42, M13HD, TR289, ID1300, MN1300	2D, 3D, 6D, WM10, WM30, 613, 813, IND813,	13A, 13C, 13D, 13F, 13NC, 1115M, 1810M,
153	3	3				
158	4	4				

## ALUMINUM & STEEL BATTERY HOLDERS WITH PRINTED CIRCUIT LUGS

ELIMINATE WIRING • LABOR SAVING

With the popularity of printed circuitry we have standardized our most popular holders with the P.C. Lugs. Choice of single or multiple holders with printed circuit lugs attached. P.C. lug #4003 is shown on page 13



CAT. NO.	HOLDS NO. OF CELLS	FIG. NO.	BATTERY CROSS REFERENCE All Batteries listed within boxes are in the same size group			
			EVEREADY	DURACELL	RAY-O-VAC	NEDA
"AA" CELL HOLDERS			( BATTERY SIZE $\frac{.531}{.565}$ O.D. $\times$ $\frac{1.906}{1.988}$ H )			
2222	1	1	E9, E12, E12N, CH15, E91, HS91, E133, E133N, E177, CH500, 505, 523, 1015, 1215, HS15	ZM9, RM12, RM12R, NC15AA, M15F, M15HD, PX21, TR133, TR133R, TR177, M505, ID1500, MN1500	5AA, 7AA, 15, RPX21, WM40, 221, 615, 715, 815,	15, 15A, 15C, 15D, 15F, 15M, 15NC, 221, 1101M, 1113M, 1306AP, 1306M, 1314M, 1606M,
2223	2	2				
"C" CELL HOLDERS			( BATTERY SIZE $\frac{.875}{1.125}$ O.D. $\times$ $\frac{1.875}{1.969}$ H )			
2224	1	1	CH35, HS35, E93, HS93, E286, 935, 1235,	M14F, 14HD, NC14C, TR286, ID1400, MN1400	1C, 4C, WM15, 614, 814,	14A, 14C, 14D, 14NC, 1600M, 14F
2225	2	2				
"D" CELL HOLDERS			( BATTERY SIZE $\frac{1.187}{1.375}$ O.D. $\times$ $\frac{2.312}{2.412}$ H )			
2226	1	1	E42N, CH50, HS50, E95, HS95, E289, 950, 1250	M13F, NC13D, RM42R, S42, M13HD, TR289, ID1300, MN1300	2D, 3D, 6D, WM10, WM30, 613, 813, IND813,	13A, 13C, 13D, 13F, 13NC, 1115M, 1810M,
2227	2	2				

CAT. NO.	HOLDS NO. OF CELLS	FIG. NO.	BATTERY CROSS REFERENCE All Batteries listed within boxes are in the same size group			
			EVEREADY	DURACELL	RAY-O-VAC	NEDA
"AA" CELL HOLDERS			( BATTERY SIZE $\frac{.531}{.565}$ O.D. $\times$ $\frac{1.906}{1.988}$ H )			
2228	1	3	E9, E12, E12N, CH15, E91, HS91, E133, E133N, E177, CH500, 505, 523, 1015, 1215, HS15	ZM9, RM12, RM12R, NC15AA, M15F, M15HD, PX21, TR133, TR133R, TR177, M505, ID1500, MN1500	5AA, 7AA, 15, RPX21, WM40, 221, 615, 715, 815,	15, 15A, 15C, 15D, 15F, 15M, 15NC, 221, 1101M, 1113M, 1306AP, 1306M, 1314M, 1606M,
2229	2	4				
"C" CELL HOLDERS			( BATTERY SIZE $\frac{.875}{1.125}$ O.D. $\times$ $\frac{1.875}{1.969}$ H )			
2230	1	3	CH35, HS35, E93, HS93, E286, 935, 1235,	M14F, 14HD, NC14C, TR286, ID1400, MN1400	1C, 4C, WM15, 614, 814,	14A, 14C, 14D, 14NC, 1600M, 14F
2231	2	4				
"D" CELL HOLDERS			( BATTERY SIZE $\frac{1.187}{1.375}$ O.D. $\times$ $\frac{2.312}{2.412}$ H )			
2232	1	3	E42N, CH50, HS50, E95, HS95, E289, 950, 1250	M13F, NC13D, RM42R, S42, M13HD, TR289, ID1300, MN1300	2D, 3D, 6D, WM10, WM30, 613, 813, IND813,	13A, 13C, 13D, 13F, 13NC, 1115M, 1810M,
2233	2	4				



## LITHIUM AND SILVER OXIDE BATTERY HOLDERS

**NEW!** Available from stock with or without printed circuit lugs in phenolic, aluminum or steel.

**NOTE:** Holders for battery types not shown can be manufactured to suit your requirements. Prompt quotations rendered.

**PHENOLIC BASE  
PHOS. BRONZE SPRING**



FIG. 1

**STANDARD LUGS**

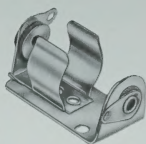


FIG. 2

**ALL STEEL**

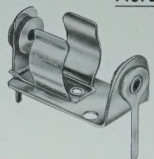


FIG. 3

**P.C. LUGS**

**STANDARD LUGS**

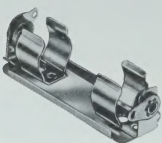


FIG. 4

**ALL STEEL**

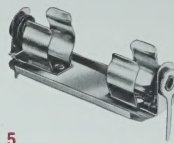


FIG. 5

**P.C. LUGS**

**STANDARD LUGS**

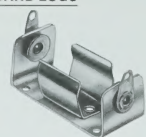


FIG. 6

**ALUMINUM**

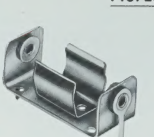
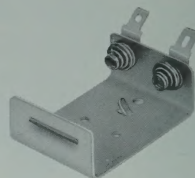
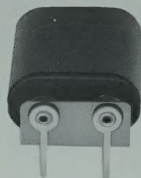


FIG. 7

**P.C. LUGS**

## 6 VOLT LITHIUM BATTERY HOLDERS

FOR DURACELL DL223A OR EQUIVALENT BATTERIES.



With Printed Circuit Terminals or Quick-Disconnect/Solder Lug Terminals.

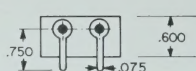
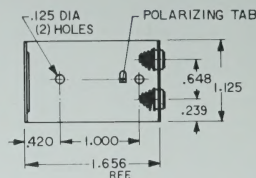
- Guaranteed polarity, non-reversible.
- Instant and efficient operation even at sub-zero temperatures.
- Lightweight, maintenance-free, pre-tested for rugged use.

### SPECIFICATIONS:

**Frame:** Aluminum 2024T-3.

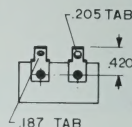
**Contacts:** Spring Steel, Nickel Plated music wire.

**Terminals:** Brass, Tin Plated.



**CAT. NO. 224**

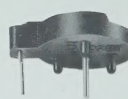
with printed circuit terminals.



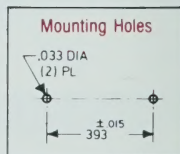
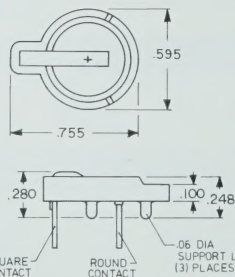
**CAT. NO. 223**

with combination quick-disconnect solder lug terminals.

## 12mm COIN CELL HOLDERS



- Accommodates 3 volt coin cell, 12mm dia. X 2.5mm
- Provides for proper polarity.
- Low profile for high density packaging.



**CAT. NO. 500**

### LITHIUM BATTERY HOLDERS

				SIZE O.D. x H.	CAT. NO.	FIG. NO.	CAT. NO.	FIG. NO.
DURACELL	PANA- SONIC	SANYO G.E.	POWER CONV.					
DL-1/2N	—	CR-1/2N	—	.457 x .415	102	1	—	—
PX28L	—	—	400-5S	.51 x .99	1103	2	2103	3
—	BR-1/2A	—	400-10S	.661 x .886	1105	2	2105	3
DL-1/2A	BR-1/2A	—	400-S	.661 x 1.315	132	6	131	7
DL-2N	—	CR-2N	—	.47 x 2.36	130	6	129	7
—	—	—	550-2S	1.31 x 4.75	2186	4	2184	5
—	—	—	—	.50 x 1.781	1107	4	2107	5

### SILVER OXIDE BATTERY HOLDERS

DURACELL	EVEREADY	NEDA	SIZE O.D. x H.	CAT. NO.	FIG. NO.
MS41	S41E	—	.46 x .16	111	1
S42	—	—	1.20 x 2.37	175	6
MS76	EPX76	1107SO	.46 x .21	127	1
D350	350	—	.44 x .13	111	1
D357	357	1131SO	.44 x .19	127	1
D386	386	1133SO	.44 x .15	111	1



The image displays three views of a circular mold assembly. The top view (left) shows a dark circular base with a lighter circular insert in the center. The side view (middle) shows the assembly's profile, including a central vertical rod and a horizontal handle. The bottom view (right) shows the underside of the assembly, revealing a circular base with a central rod and a horizontal handle.

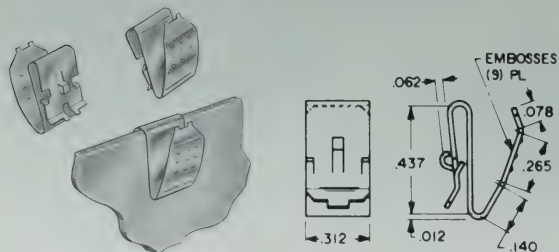
## 9

## BATTERY CLIPS AND ACCESSORIES

**SINGLE "AA" CELL SNAP-ON CLIPS**

Clips over panels from .060 to .070 thk, and is anchored by sharp barbs, eliminating the need for special grooves, slots or holes. Spring-tension of contact leg provides excellent contact and takes up any variation of battery length. External solder "ear" will hold wire for easy soldering. Spring Tempered Steel, Nickel Plated.

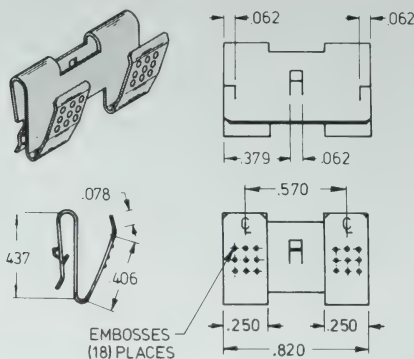
- IDEAL FOR MOLDED CASES
- SELF-ANCHORING
- LOW COST
- SNAG FREE BATTERY INSERTION



Cat. No. 209 - Single

**DUAL "AA" CELL SNAP-ON CLIP**

New dual design provides an economical and convenient method of mounting two batteries in series without wiring. Clip is securely anchored by sharp barbs.

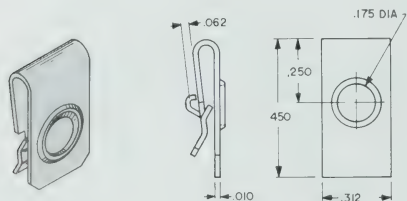


**Material:** Spring Tempered Steel, Nickel Plated.

Cat. No. 210 - Dual

**'AA' POSITIVE SNAP-ON CLIP**

This clip helps prevent battery from shifting when installed. Battery tip sits securely in the indented contact. Anchors securely by sharp barbs to panel from .060 - .070 thk. No grooves, slots or holes needed. External "ear" simplifies soldering.

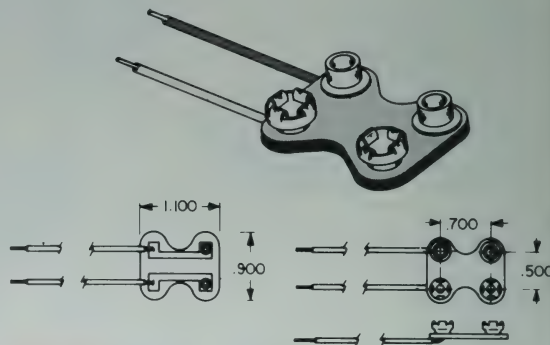


**Material:** Spring Tempered Steel, Nickel Plated.

Cat. No. 228

PARALLEL '9' VOLT BATTERY STRAP

This dual battery strap is pre-wired for connecting two 9 Volt batteries in parallel to increase current capabilities. Steel, Nickel Plated contacts. Fibre base. 22 gauge, 7/30 pre-bond. P.V.C. insulation. 7" long leads.

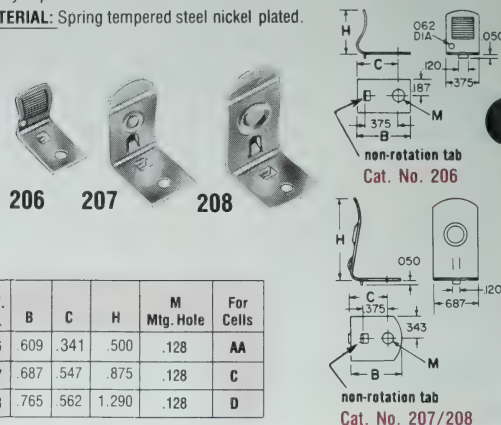


Cat. No. 227

### ECONOMY CLIPS for "AA", "C" and "D" Cells

Used with non-metallic bases. Has, anti-rotation tab, recessed contact holds battery in place.

**MATERIAL:** Spring tempered steel nickel plated.



CAT. NO.	B	C	H	M Mtg. Hole	For Cells
206	.609	.341	.500	.128	AA
207	.687	.547	.875	.128	C
208	.765	.562	1.290	.128	D

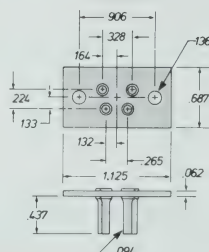
## BATTERY PLUGS

**SPECIFICATIONS:**

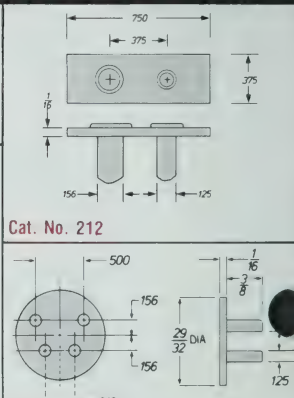
**Wafer**—1/16 XP Phenolic

**Pins**—Brass Nickel Plate

**Note:** Other variations can be made to your specifications.



Cat. No. 214



Cat. No. 213



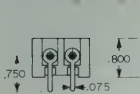
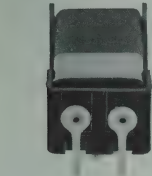
# 9 VOLT HOLDERS AND ACCESSORIES

KEYSTONE

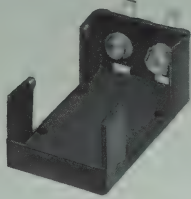


## UNIVERSAL 9 VOLT BATTERY HOLDERS

With Printed Circuit Terminals or Combination Quick-Disconnect Solder Lug Terminals.



**CAT. NO. 1294**  
with printed circuit terminals



**CAT. NO. 1295**  
with combination quick disconnect solder lug terminals.

Holds any size, any shape, standard 9 V battery.

Eliminates need to specify an exact battery brand, size or shape. Ideal for power source or memory backup use in minicomputers, telecommunications, data processing, security systems, clocks, radios, toys and appliances.

- Male-female snap-in terminals assure positive contact and proper polarity.
- Durable, rugged construction.
- Excellent spring retention — holds battery in place.
- Withstands severe shock and vibration.
- Operating temperature range: -40°C to +130°C.
- Impervious to most industrial solvents.
- Meets UL approval standards — Made in the U.S.A.

**Body:** Molded from high impact, 30% glass filled Nylon.

**Terminals:** Brass, Tin Plated.

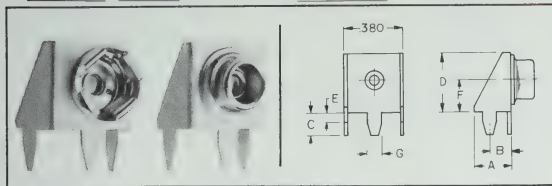
**Contacts:** Steel, Nickel Plated, highly corrosion resistant.

## PRINTED CIRCUIT SNAP-ONS ("9" VOLT)

### MOUNT DIRECTLY TO PRINTED CIRCUIT BOARD

P. C. Male/Female for any standard "9 Volt" Battery.  
Cut costs by eliminating wiring. Compact Space Saver

**Material:** FRAME: Steel, Tin Plate **CONTACTS:** Steel Nickel Plate



### SIDE VIEW MOUNTING POSITION

**NO. 593**  
**NO. 594**



To Mount Battery On Board

**NO. 635**  
**NO. 636**



To Mount Battery Off Board

### MOUNTING HOLES

For NO. 593  
NO. 594

For NO. 635  
NO. 636

CAT. NO.	CONTACT	A	B	C	D	E	F	G
593	MALE	.200	.125	.120	.550	.050	.350	.062
594	FEMALE	.200	.125	.120	.550	.050	.350	.062
635	MALE	.250	.150	.180	.380	.062	.190	.100
636	FEMALE	.250	.150	.180	.380	.062	.190	.100

## BATTERY STRAPS

Sturdily constructed. Male and female snap contacts are steel, nickel plated. Highly corrosion resistant. Female contacts are heat treated to spring temper. Maintains constant spring tension. Accepts numerous insertions and disconnects to meet U.L. approved standards. Provides excellent mechanical strength and low electrical contact resistance. Wire leads firmly soldered to contacts. Wires have tinned copper conductors, 22 gauge, 7/30 pre-bond, with P.V.C. insulation. Rated to 80 degrees C and 150V. Meets requirements of U.L. style #1568.

**MODIFICATIONS AVAILABLE WITH LONGER OR SHORTER LEAD LENGTHS.**

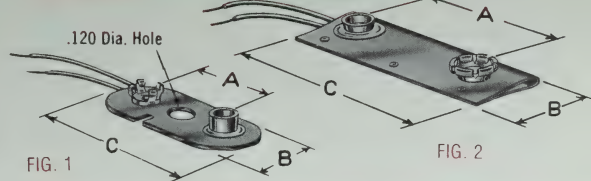


FIG. 1

FIG. 2

CAT. NO.	Fig.	A	B	C	Length Of Wire 3/4" Strip	BATTERY CROSS REFERENCE ALL BATTERIES LISTED WITHIN BOXES ARE IN THE SAME SIZE GROUP			
						EVEREADY	DURACELL	RAY-O-VAC	NEDA
68	1	.500	.535	1.030	None	CH22	M1604HD	NC1604	1604NC
72	1	.500	.535	1.030	6.50	HS22	ID146X	D1604	1604C
83	2	.500	.565	.875	6.50	E146X	TR146X	1604	1604M
The connectors above will fit all standard "9 volt" batteries as listed						216	M1604	A1604	1604
						246	ID1604		1602
						415	MN1604		213
						416	303396		217
						522	NC196V		1604A
The connectors listed below are for various types of Snap Connector Batteries. Made of Spring Brass and Nickel Plated. Refer to battery listings as shown.						1222			1604D
						E303396			1619M
73	2	.750	.720	1.750	9.00	266			1605
74	2	.937	.720	1.843	8.50	477			211
						479			214
						2356N			1612
75	2	1.375	.720	2.500	8.50	276			1603
76	2	1.500	.720	2.615	8.00	455			201
						457			203
						467			200
77	2	2.500	.720	3.429	7.00	490			204

## "9" VOLT SNAP-IN BATTERY HOLDER

For use with standard "9" volt battery. Battery snaps in place to insure positive contact. Ideal where severe shock and vibration are encountered. Available with standard solder lugs or printed circuit lugs.

**MATERIAL:**

**FRAME:** Aluminum

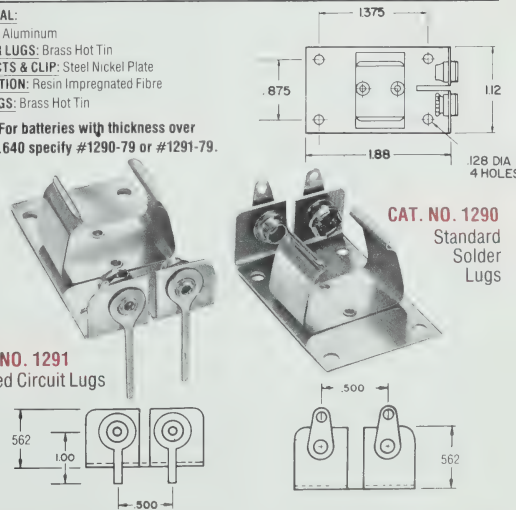
**SOLDER LUGS:** Brass Hot Tin

**CONTACTS & CLIP:** Steel Nickel Plate

**INSULATION:** Resin Impregnated Fibre

**P.C. LUGS:** Brass Hot Tin

**NOTE:** For batteries with thickness over .640 specify #1290-79 or #1291-79.



**CAT. NO. 1290**  
Standard Solder Lugs

**CAT. NO. 1291**  
Printed Circuit Lugs



KEYSTONE

# BATTERY CLIPS AND HOLDERS

## STEEL SPACE SAVER BATTERY CLIPS FOR "AA", "C" AND "D" CELLS

IDEAL FOR • CARBON ZINC • NI-CAD • MERCURY • LITHIUM • ALKALINE BATTERIES  
Available with insulated or dimple contact. Positive contact grips battery securely.



### MATERIAL SPECIFICATIONS

**Clips**—Carbon Steel, SAE 1050, Heat Treated to Spring Temper, Nickel Plate Finish, Corrosion-resistant.

**Contact Eyelets**—Stainless Steel

**Insulating Washers**—Moisture proof, resin impregnated fibre.

**Terminal Lugs**—Brass Hot Tin

FIG. 1 DIMPLE CONTACT

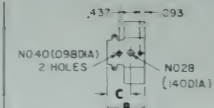
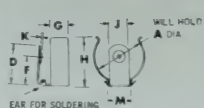


86  
89  
99

FIG. 2 INSULATED CONTACT



87  
88  
100



BOTTOM VIEW FOR BOTH

CAT. NO.	FIG.	A DIA. MIN.-MAX.	FOR CELLS	.015 B	.010 C	.015 D	.015 F	.005 G	.020 H	.005 J	.005 K	.015 M	STEEL THICKNESS
86	1	.875 to 1.125	C	.703	.391	.812	.593	.375	.937	.500	.050	.605	.020
87	2	.875 to 1.125	C	.703	.391	.812	.593	.375	.937	.500	.070	.605	.020
88	2	1.187 to 1.350	D	.775	.463	1.075	.750	.437	1.187	.500	.070	.609	.020
89	1	1.187 to 1.350	D	.775	.463	1.075	.750	.437	1.187	.500	.050	.609	.020
99	1	.531 to .650	AA	.703	.391	.609	.375	.375	.609	.312	.050	.353	.015
100	2	.531 to .650	AA	.703	.391	.609	.375	.375	.609	.312	.070	.353	.015

## ALUMINUM & STEEL BATTERY AND COMPONENT HOLDERS

A complete line of clips suitable for secure mounting of round or square batteries or electronic components.

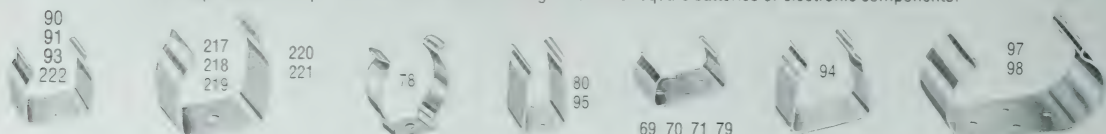


FIG. 1



FIG. 2

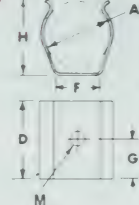


FIG. 3



FIG. 4



FIG. 5



CAT. NO.	FIG.	A MIN.-MAX. DIA. OR SIZE	*FOR CELLS	± .005 B	± .005 C	± .005 D	± .005 F	± .010 G	± .015 H	± .003 M MTG. HOLES	MATERIAL
69	4	.562 (2)	(2) AA	.625	.437	.625	1.125	.093	.562	4 #40 (.098)	.015 Steel
70	4	.656 (3)	(2) RM13	.625	.437	.625	1.343	.093	.657	4 #40 (.098)	.025 Alum
71	3	.563 x 1.031	9 VOM	—	.437	.625	1.031	.093	.657	2 #40 (.098)	.015 Steel
78	2	1.187 to 1.350	D	—	—	.900	.962	.250	1.218	1 #25 (.136)	.020 Steel
79	4	.660 to 1.240	TR146A	.625	.437	.625	1.050	.093	.765	4 #40 (.098)	.015 Steel
80	3	.660 to 1.240	9 VOM	—	.437	.625	.875	.093	1.187	2 #40 (.098)	.015 Steel
90	1	.975 to .468	AAA	—	.437	.625	.312	.093	.453	2 #40 (.098)	.015 Alum
91	1	.531 to .656	AA	—	.437	.625	.406	.093	.662	2 #40 (.098)	.020 Alum
93	1	.875 to 1.125	D	—	.437	.625	.937	.093	.921	2 #40 (.098)	.025 Alum
94	1	1.187 to 1.375	D	—	.437	.625	1.250	.093	1.218	2 #40 (.098)	.032 Alum
95	3	.625 x 1.040	9 VOM	—	.437	.625	.656	.093	1.135	2 #40 (.098)	.025 Alum
97	5	1.031 (2)	2 (D)	—	.437	.625	2.062	.093	1.125	2 #40 (.098)	.025 Alum
98	5	1.310 (2)	2 (D)	1.125	.437	1.000	2.856	.281	1.437	4 #40 (.098)	.032 Alum
217	2	1.375 to 1.500	NI-CAD	—	—	.812	1.218	.406	*.466	1 #22 (.157)	.025 Steel
218	3	1.437 to 1.667	NI-CAD	—	—	.812	1.375	.406	*.501	1 #22 (.157)	.025 Steel
219	2	2.000 to 2.500	NI-CAD	—	—	.812	1.667	.406	2.168	1 #22 (.157)	.025 Steel
220	2	1.875 to 2.000	9mm	—	—	.315	.156	.157	.280	1 #42 (.093)	.010 Steel
221	2	.853 to .890	.875	—	—	.488	.938	.234	.906	1 #22 (.157)	.020 Steel
222	1	.475 to 1.105	D	—	.437	.625	.937	.093	.921	2 #40 (.098)	.020 Steel

### MATERIAL SPECIFICATIONS

**ALUMINUM CLIPS** Per QQ-A-362, No Finish.

**STEEL CLIPS** Carbon Steel, SAE 1050, Heat Treated to Spring Temper, Nickel Plate Finish.

\*These clips will hold batteries or components of similar dimensions.



# BATTERY HOLDER CLIPS AND ACCESSORIES

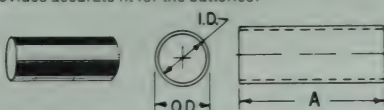
KEYSTONE



## BATTERY CELL TUBES



Used with our 1100 and 2100 series of Battery Holders. Tubes hold 2, 3 or 4 batteries in line when end clips are used. Tube is black wound paper. Retains stiffness and provides accurate fit for the batteries.

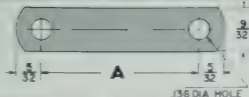


CAT. NO.	Length "A"	Inside Diam. "I.D."	Outside Diam. "O.D."	Holds No. Cells	Battery Type
4023	2.750	.670	.730	2	AA
4024	4.687	.670	.730	3	AA
4025	6.625	.670	.730	4	AA
4026	2.500	1.050	1.100	2	C
4027	4.437	1.050	1.100	3	C
4028	6.375	1.050	1.100	4	C
4029	3.250	1.345	1.395	2	D
4030	5.562	1.345	1.395	3	D
4031	7.750	1.345	1.395	4	D

## CONNECTOR STRAPS (JUMPERS)

Various lengths suitable for many applications in electronic assemblies.

MAT. .015 TINNED BRASS



CAT. NO.	A	CAT. NO.	A	CAT. NO.	A
4006	.437	4011	.781	4016	1.312
4007	.625	4012	.812	4017	1.343
4008	.687	4013	.875	4018	1.500
4009	.718	4014	1.000	4019	1.562
4010	.750	4015	1.187	4020	1.625

## INSULATED POLARIZING WASHERS

Eliminates danger of damage and short circuit to expensive transistor equipment. Washers hold securely when snapped over eyelets used on our standardized battery holders. For AA, C & D cells.

MATERIAL: Molded Polyethylene

CAT. NO. 59 (RED)

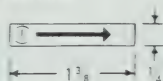
CAT. NO. 60 (BLACK)



## POLARITY INDICATING LABELS

- NO GLUING OR WETTING NEEDED
- PRESSURE SENSITIVE ADHESIVE BACK
- ECONOMICAL
- ADHERES TO ALL SURFACES

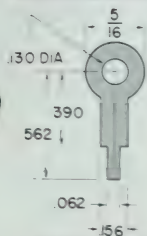
Recommended where proper polarity of battery insertion or circuit polarity is to be shown. Labels are two color, (+) positive side red arrow; (-) negative side blue.



CAT. NO. 58



## PRINTED CIRCUIT TERMINAL



This P.C. Terminal was designed for our "AA" cell holders either Aluminum or Steel. It has a built in stop for ease in assembly. Material: .015 copper, tin plate.

CAT. NO. 680

## BATTERY RETAINER CLIPS



- Prevents battery loosening in battery holder
- Slips into the ears of the clip of battery holder
- Made of hi-carbon steel, spring tempered zinc plated



Retainer for "AA" or Mercury cells with diameters of .532" to .562". Used with Keystone Battery Clips #91, 95, 99 and 100.

CAT. NO. 61



Retainer for "C" cells or similar size batteries to 1.032" diameter. Used with Keystone Battery Clips #86, 87, 93 and 222.

CAT. NO. 62



Retainer for "D" cells or similar size batteries to 1.343" diameter. Used with Keystone Battery Clips #88, 89 and 94.

CAT. NO. 63

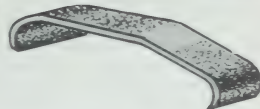


Retainer for Mercury cells with diameter of .650" that fit Keystone Battery Clips #99 and 100.

CAT. NO. 66

## ALUMINUM RETAINER FOR #174 AND #176 HOLDERS

Made of 2024-ST4 Aluminum slides over the lips of the clip holding battery firmly in place.



CAT. NO. 64 FOR #174 HOLDER

CAT. NO. 65 FOR #176 HOLDER

## BATTERY SPRING CONTACT



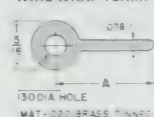
CAT. NO. 211

GERMANIUM WIRE—NICKEL PLATED

## CONTACT ASSEMBLY TERMINAL LUGS

USED ON BATTERY HOLDERS

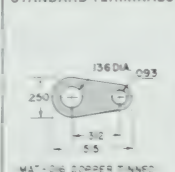
PRINTED CIRCUIT OR WIRE WRAP TERM.



Can be substituted for the standard lug used on our Holders.

CAT. NO.	A	CAT. NO.	A
4000	500	4002	750
4001	562	4003	1,000

STANDARD TERMINALS



Universal terminal proven popular in electronic assemblies and Battery Holders.

CAT. NO. 4004

KWIK CONNECT



For solderless connection applications. Will accept .205 female disc contact.

CAT. NO. 4005



**KEYSTONE**

## SAFE 'N SURE TEST LEADS

Compatible with instruments made by Triplett, Simpson, Fluke, Keithley, Amprobe, Beckman, B&K and other leading manufacturers.

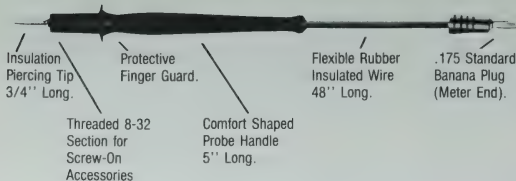
The leads consist of molded ABS probe handles, flame retardant per UL 94V-0, and are insulated against shock hazard. Sharp, stainless steel probe tips have a threaded 8-32 section to accept screw-on test hooks, clips, banana plugs, shrouded plugs and spade lugs. The non-kinking 48"

long, 18 gauge, flexible tinned-copper wires have a .140 O.D. with .041 rubber wall insulation. Working voltage is 5 KV nominal; 20 KV breakdown.

The Miniature Test Leads features similar probe handles and tip designs. These leads have a 42" long, 20 gauge, .105 O.D. flexible wire with .032 rubber wall insulation. Working voltage is 2 KV nominal; 10 KV breakdown.

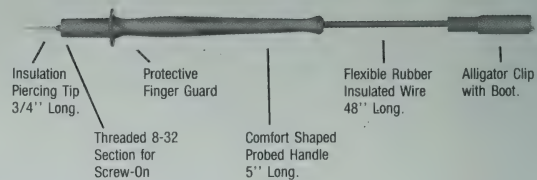
CUSTOM LEADS AVAILABLE ON SPECIAL ORDER.

### STANDARD BANANA PLUG LEAD



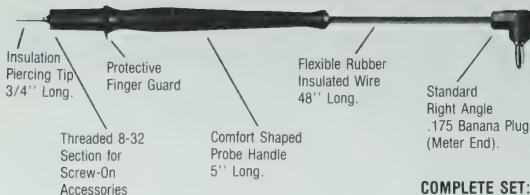
**COMPLETE SET:**  
(1) red - (1) black  
**CAT. NO. 8022**

### STANDARD ALLIGATOR CLIP LEAD



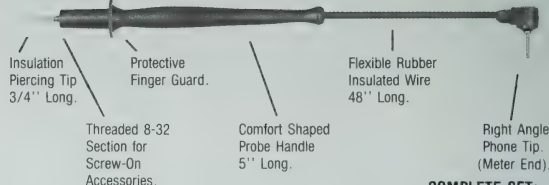
**COMPLETE SET:**  
(1) red - (1) black  
**CAT. NO. 8061**

### STANDARD R/A BANANA PLUG LEAD



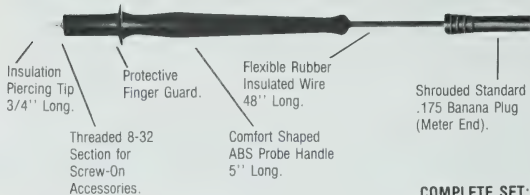
**COMPLETE SET:**  
(1) red - (1) black  
**CAT. NO. 8023**

### STANDARD R/A ANGLE PHONE TIP LEAD



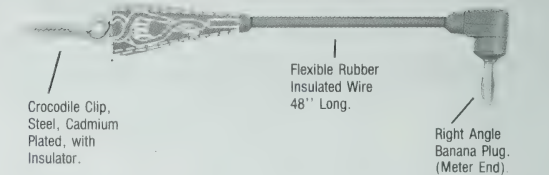
**COMPLETE SET:**  
(1) red - (1) black  
**CAT. NO. 8062**

### SHROUDED BANANA PLUG LEAD



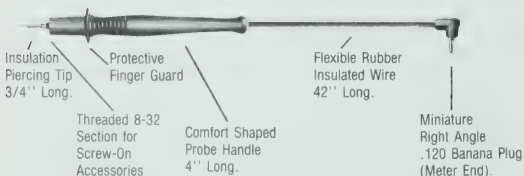
**COMPLETE SET:**  
(1) red - (1) black  
**CAT. NO. 8026**

### CROCODILE CLIP R/A BANANA PLUG LEAD



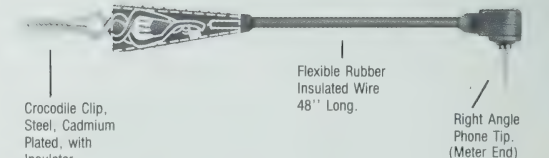
**COMPLETE SET:**  
(1) red - (1) black  
**CAT. NO. 8063**

### MINIATURE R/A BANANA PLUG LEAD



**COMPLETE SET:**  
(1) red - (1) black  
**CAT. NO. 8024**

### CROCODILE CLIP R/A PHONE TIP LEAD



**COMPLETE SET:**  
(1) red - (1) black  
**CAT. NO. 8064**



# SAFE 'N SURE TEST LEAD ACCESSORIES

MATES WITH ALL SAFE 'N SURE TEST LEADS

KEYSTONE



## TEST HOOKS

Spring-loaded hook probe. Beryllium Copper Silver Plated hook wire. Molded Nylon insulator.



8-32 Thread  
Mates with  
Probe Tip.

CAT. NO.	COLOR
8014	Red
8015	Black

## INSULATED ALLIGATOR CLIP

Vinyl Insulating boots. Mating teeth for positive grip. Made of Steel, Cadmium Plated.

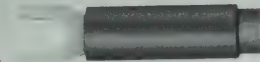


8-32 Thread  
Mates with  
Probe Tip.

CAT. NO.	COLOR
8016	Red
8017	Black

## INSULATED SPADE LUGS

Steel Nickel Plated screw-on lugs attach to probe. Molded ABS insulated handles. For use as Binding Post terminal connections.

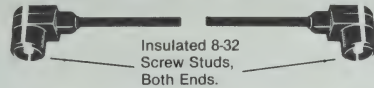


8-32 Thread  
Mates with  
Probe Tip.

CAT. NO.	COLOR
8018	Red
8019	Black

## RIGHT ANGLE WIRE LEAD (ONLY)

Make your own test lead combinations. 8-32 insulated stud, both ends. Mates with all Keystone test lead accessories on this page.



Insulated 8-32  
Screw Studs,  
Both Ends.

Wire: #18 AWG, Tinned- Copper, .140 O.D.

.041 wall, insulated.

Rating: 5 KV nominal; 20 KV breakdown.

R/A Termination: Polyethylene, molded both ends.

**COMPLETE SET:**  
(1) red - (1) black  
**CAT. NO. 8009**

## BANANA PLUGS

Insulated standard .175 Banana Plug screws on to mating probe tip.



.175 Plug

8-32 Thread  
Mates with  
Probe Tip.

CAT. NO.	COLOR
8012	Red
8013	Black

**Spring:** Beryllium  
Copper.

**Body:** Brass,  
Nickel Plated.

**Handle:** ABS.

## SHROUDED BANANA PLUG

Minimizes Shock Hazard.



.175 Plug

8-32 Thread  
Mates with  
Probe Tip.

CAT. NO.	COLOR
8010	Red
8011	Black

**Spring:** Beryllium  
Copper.

**Body:** Brass,  
Nickel Plated.

**Handle:** ABS.

## TIP PROTECTOR

Polyethylene design fits over tips so that only the piercing end protrudes. For densest PC boards.

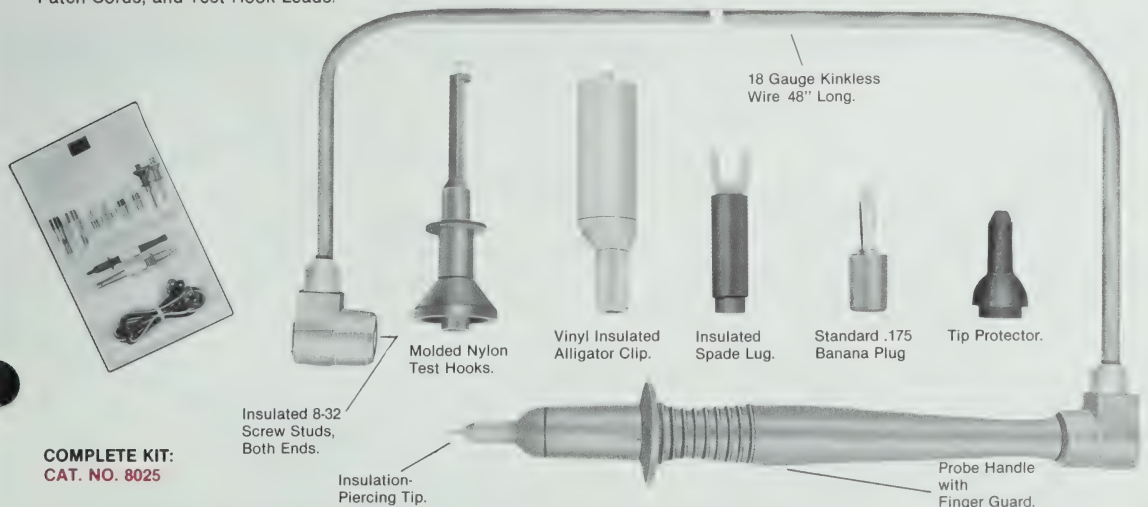


CAT. NO.	COLOR
8020	Red
8021	Black

## SAFE 'N SURE UNIVERSAL TEST LEAD KIT

This Universal Kit features the flexibility to interchange all accessories at either end, and in any combination you desire. With it you can make Test Leads, Jumper Cables, Clip Leads, Patch Cords, and Test Hook Leads.

Both the wire and accessories have an 8-32 threaded portion which facilitates interchangeability. Complete with velcro carry pouch. Built-in belt loop.



**COMPLETE KIT:**  
**CAT. NO. 8025**

Insulated 8-32  
Screw Studs,  
Both Ends.

Insulation-  
Piercing Tip.

Molded Nylon  
Test Hooks.

Vinyl Insulated  
Alligator Clip.

Insulated  
Spade Lug.

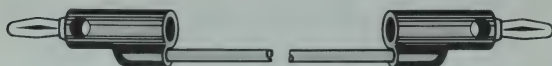
Standard .175  
Banana Plug

Tip Protector.

Probe Handle  
with  
Finger Guard.

## MULTI-PATCH, STANDARD BANANA PLUG

Standard .175 Dia. Banana Plug. Permits multiple plug-ins from top or side. Accepts .175 plugs.



**Handles:** Polyethylene  
**Body:** Brass, Nickel Plated  
**Springs:** Four-leaved Beryllium Copper.  
**Wire:** Flexible Copper, #18 AWG, .140 O.D., .041 wall, insulated.  
**Rating:** 5 KV nominal; 20 KV breakdown.

CAT. NO.	COLOR	LENGTH
8027	Red	12"
8028	Black	12"
8029	Red	36"
8030	Black	36"
8031	Red	60"
8032	Black	60"

## ALLIGATOR CLIP JUMPERS

Precision matching teeth for more reliable contact. Alligator clips are fully insulated. **Clips:** Steel, Cadmium Plated.  
**Boots:** Vinyl plastic.



### STANDARD

CAT. NO.	COLOR	LENGTH
8042	Red	12"
8043	Black	12"
8044	Red	36"
8045	Black	36"
8046	Red	60"
8047	Black	60"

**Wire:** Flexible Copper, #18 AWG, .140 O.D., .041 wall, insulated.  
**Rating:** 5 KV nominal; 20 KV breakdown.

### MINIATURE

CAT. NO.	COLOR	LENGTH
8048	Red	12"
8049	Black	12"
8050	Red	36"
8051	Black	36"
8052	Red	60"
8053	Black	60"

**Wire:** Flexible Copper, #20 AWG, .105 O.D., .032 wall, insulated.  
**Rating:** 2 KV nominal; 10 KV breakdown.

## TEST HOOK JUMPER CABLES

Makes difficult IC connections easy. Attaches firmly to component leads and terminals.



**Wire:** Flexible Copper, #18 AWG, .140 O.D., .041 wall, insulated.  
**Handles:** Polyethylene.  
**Body:** Brass, Nickel Plated.  
**Hook:** Spring-loaded Beryllium Copper conductor with molded Nylon insulator.  
**Rating:** 5 KV nominal; 20 KV breakdown.

CAT. NO.	COLOR	LENGTH
8036	Red	12"
8037	Black	12"
8038	Red	36"
8039	Black	36"
8040	Red	60"
8041	Black	60"

## BANANA PLUG/ALLIGATOR CLIP JUMPER

Standard .175 Dia. Banana Plug Permits multiple plug-ins from top or side. Accepts .175 plugs. Alligator Clips are fully insulated. With Precision matching teeth for more reliable contact.

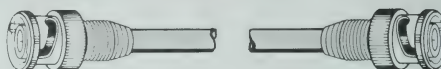


**Handles:** Polyethylene  
**Body:** Brass, Nickel Plated  
**Springs:** Four-leaved Beryllium Copper  
**Clips:** Steel, Cadmium Plated  
**Boots:** Vinyl plastic  
**Wire:** Flexible Copper, #18 AWG, .140 O.D., .041 wall, insulated.  
**Rating:** 5 KV nominal; 20 KV breakdown.

CAT. NO.	COLOR	LENGTH
8054	Red	12"
8055	Black	12"
8056	Red	36"
8057	Black	36"
8058	Red	60"
8059	Black	60"

## RF PATCH CORD/BNC MALE, BOTH ENDS

Crimped for greater reliability, field repairable.



**Connector:** Brass, Nickel Plated.  
**Wire:** RG-58/U Coaxial Black.  
**Jacket:** Vinyl.

CAT. NO.	LENGTH
8033	12"
8034	36"
8035	60"

## SWITCHABLE OSCILLOSCOPE PROBE KIT

Used with all scopes to 100 MHz range, including Tektronix, Hewlett-Packard and Philips. This passive X1, X10 probe has a 3-position slide for function select, including ground. Tip is sharp,

heavy-duty. 5' cable is slender and very flexible. Break-resistant center conductor. 10-60 pF compensation range. All accessories supplied as shown.

### SPECIFICATIONS:

#### Position X1

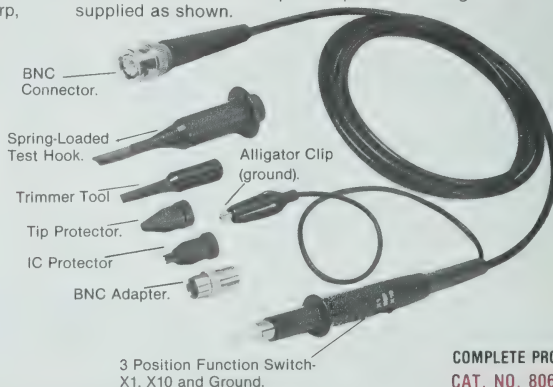
**Bandwidth:** DC to 10 MHz  
**Input Resistance:** 1MΩ (oscilloscope input)  
**Input Capacity:** 40 pF plus oscilloscope capacity  
**Working Voltage:** 600 VDC (including Peak AC)

#### Position Ref.

Probe tip grounded via 9MΩ resistor, oscilloscope input grounded

#### Position X10

**Bandwidth:** DC to 100 MHz  
**Rise Time:** 3.5 nS  
**Input Resistance:** 10MΩ ± 1% used with oscilloscope with 1MΩ input.  
**Input Capacity:** 11.5 pF used with oscilloscope having 30 pF input capacity.  
**Compensation Range:** 10-60 pF  
**Working Voltage:** 600 VDC (including Peak AC)



COMPLETE PROBE KIT:  
**CAT. NO. 8060**



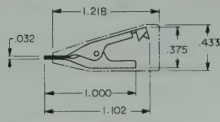
## MATERIAL : STEEL, NICKEL PLATED-INSULATION VINYL

### MICRO-SOLDER CONNECTION WITH STRAIN RELIEF

IDEAL FOR BOARDS AND TIGHT SPOTS FOR IC'S AND MICRO CONNECTIONS



**CAT. NO. 5030**  
NON-INSULATED



Maximum Jaw Spread- 236  
Teeth Length- 157

INSULATED  
(complete with boot)

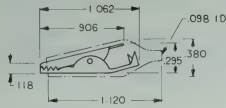


CAT. NO.	COLOR
5031	RED
5032	BLACK

### SMALL-SOLDER CONNECTION WITH STRAIN RELIEF



**CAT. NO. 5033**  
NON-INSULATED



Maximum Jaw Spread- 236  
Teeth Length- 393  
Teeth Width- .098 Min.

INSULATED  
(complete with boot)

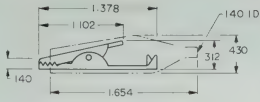


CAT. NO.	COLOR
5034	RED
5035	BLACK
5036	GREEN
5037	YELLOW

### MEDIUM-SOLDER CONNECTION WITH STRAIN RELIEF



**CAT. NO. 5038**  
NON-INSULATED



Maximum Jaw Spread- 236  
Teeth Length- 500  
Teeth Width- 118

INSULATED  
(complete with boot)

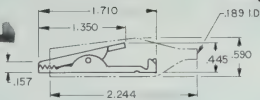


CAT. NO.	COLOR
5039	RED
5040	BLACK

### LARGE-SOLDER CONNECTION WITH STRAIN RELIEF



**CAT. NO. 5041**  
NON-INSULATED



Maximum Jaw Spread- 315  
Teeth Length- 551  
Teeth Width- 118

INSULATED  
(complete with boot)



CAT. NO.	COLOR
5042	RED
5043	BLACK

### X-LARGE-SOLDER CONNECTION BARREL ACCEPTS WIRE OR BANANA PLUG



**CAT. NO. 5044**  
NON-INSULATED



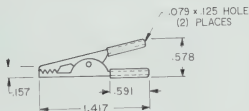
Maximum Jaw Spread- 315  
Teeth Length- 551  
Teeth Width- 118

INSULATED  
(complete with boot)



CAT. NO.	COLOR
5045	RED
5046	BLACK

### MEDIUM-SOLDER CONNECTION PLASTIC INSULATED HANDLES



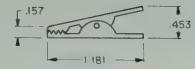
Material-Steel, Nickel Plate  
Maximum Jaw Spread- 157  
Teeth Width- 118

CAT. NO.	COLOR
5051	RED
5052	BLACK

### MEDIUM-SOLDER CONNECTION



**CAT. NO. 5047**

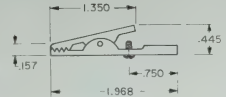


Maximum Jaw Spread- 354  
Teeth Width- 118

### LARGE-SCREW CONNECTION



**CAT. NO. 5048**

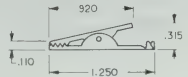


Maximum Jaw Spread- 315  
Teeth Width- 118

### MEDIUM-SOLDER CONNECTION WITH STRAIN RELIEF



**CAT. NO. 5049**

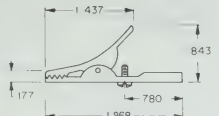


Maximum Jaw Spread- 236  
Teeth Width- 118

### LARGE-SCREW CONNECTION



**CAT. NO. 5050**

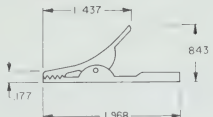


Maximum Jaw Spread- 590  
Teeth Width- 228

### LARGE-SOLDER CONNECTION



**CAT. NO. 5055**

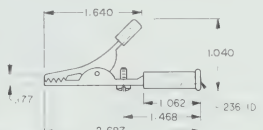


Maximum Jaw Spread- 590  
Teeth Width- 228

### LARGE-SCREW CONNECTION WITH STRAIN RELIEF

PLASTIC INSULATED HANDLES

CAT. NO.	COLOR
5053	RED
5054	BLACK



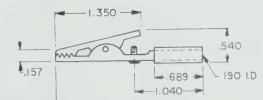
Maximum Jaw Spread- 433  
Teeth Width- 228

### LARGE-SCREW CONNECTION WITH STRAIN RELIEF HANDLE. SLIM JAWS

CAN BE USED IN LIMITED ACCESS PLACES. BARREL ACCEPTS

STANDARD BANANA PLUGS

CAT. NO.	COLOR
5056	RED
5057	BLACK



Maximum Jaw Spread- 315  
Teeth Width- 118



KEYSTONE

# TEST TIPS AND JACKS

## SOLDERLESS TIP PLUG WITH .080" DIA.



Fully insulated molded nylon sleeve. Maximum reliability with minimum contact resistance. Recessed metal heads eliminates possibility of shock or grounding. Designed for solderless connection of up to 16 gauge stranded wire which fits through handle and tip and is secured by screwing handle tight. Current rating 10 amps. Fits all standard tip jacks.

### SELECTION OF COLORS

CAT. NO.	COLOR	CAT. NO.	COLOR
6000	WHITE	6003	GREEN
6001	RED	6004	YELLOW
6002	BLACK	6005	BLUE

### MATERIAL SPECIFICATIONS

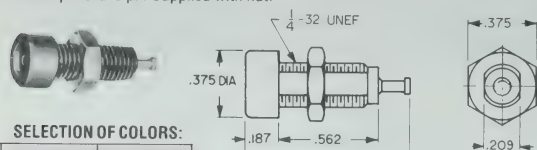
HANDLE: Nylon  
PER ASTM D4066

TIP: Brass  
Nickel Plated

## FULLY-INSULATED DELUXE TIP JACK

### ACCEPTS .080" TIP (WITH CLOSED ENTRY CONTACT)

Fully molded body with recessed closed entry design. Assures maximum retention with minimum contact resistance. Prevents accidental insertion of larger diameter probes. Current rating: 10 amps. Peak Voltage 11,000 volts. Capacitance to metal panel 2.0 pF. Supplied with nut.



### SELECTION OF COLORS:

CAT. NO.	COLOR
6030	WHITE
6031	RED
6032	BLACK
6033	GREEN
6034	YELLOW
6035	BLUE

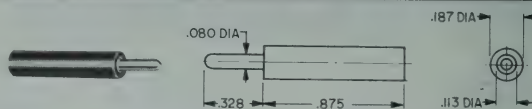
### MATERIAL SPECIFICATIONS

BODY: Molded nylon  
ASTM D4066

CONTACT: Beryllium Copper  
Silver Plated

TERMINAL: Brass, Tin Plated

## MINIATURE TIP PLUG WITH .080" DIA.



Designed for miniaturization where space is critical. Solder lead connection. Maximum reliability with minimum contact resistance. Base of tip is recessed to eliminate shock or grounding. Fits horizontal tip jacks. Current rating: 10 amps.

### SELECTION OF COLORS

CAT. NO.	COLOR	CAT. NO.	COLOR
6006	WHITE	6009	GREEN
6007	RED	6010	YELLOW
6008	BLACK	6011	BLUE

### MATERIAL

#### SPECIFICATIONS

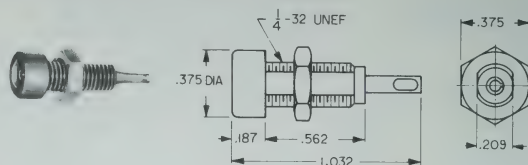
HANDLE: Nylon  
PER ASTM D4066

TIP: Brass  
Nickel Plated

## FULLY-INSULATED STANDARD TIP JACK

### ACCEPTS .080" TIP

Economical tip jacks with molded nylon body. Recessed for ease in insertion. Low contact resistance. Formed phosphor bronze contact with solder hole for ease in attaching wire. Current rating 10 amps. Peak Voltage 8000 volts. Capacitance to metal panel 3.8 pF. Supplied with nut.



### SELECTION OF COLORS:

CAT. NO.	COLOR
6018	WHITE
6019	RED
6020	BLACK
6021	GREEN
6022	YELLOW
6023	BLUE

### MATERIAL SPECIFICATIONS

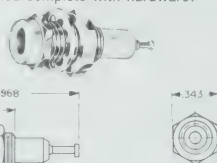
BODY: Molded nylon  
ASTM D4066

CONTACT: Phosphor Bronze  
Tin Plated

## METAL-CLAD TIP JACK (MIL)

### ACCEPTS .080" TIP (WITH CLOSED ENTRY CONTACT)

High quality tip jack for high reliability industrial applications. Ideal for use where required to withstand severe environmental conditions, temperature, vibration and salt spray. Recessed closed entry contact. Current rating: 5 amps. Peak voltage: 8000 volts. Meets MS-16108 Rev. F of MIL-STD-242A and MIL-C-39024/10. Capacitance to metal panel 3.8 pF. Supplied complete with hardware.



### MATERIAL SPECIFICATIONS

BODY: Molded nylon  
ASTM D4066

SHELL & NUT: Brass  
QQ-B-626. Nickel  
Plate QQ-N-290

CONTACT: Beryllium  
copper PER QQ-  
C-533. Gold Plate  
MIL-G-45204

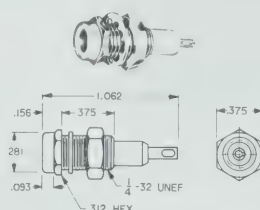
### SELECTION OF COLORS

CAT. NO.	COLOR
6012	WHITE
6013	RED
6014	BLACK
6015	GREEN
6016	YELLOW
6017	BLUE

## METAL-CLAD TIP JACK (STD)

### ACCEPTS .080" TIP

Molded nylon body with metal jacket. Contact is formed from phosphor bronze with solder hole for ease in attaching wire. Designed for positive contact, easy insertion and withdrawal. Current rating: 10 amps. Peak voltage: 7000 volts. Capacitance to metal panel 3.8 pF. Supplied with nut.



### SELECTION OF COLORS:

CAT. NO.	COLOR
6024	WHITE
6025	RED
6026	BLACK
6027	GREEN
6028	YELLOW
6029	BLUE

### MATERIAL

#### SPECIFICATIONS

BODY: Molded nylon  
ASTM D4066

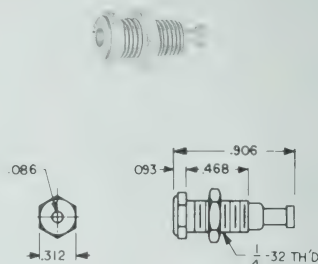
SHELL: Brass Nickel  
Plate

CONTACT: Phosphor  
Bronze Silver Plated

## UNINSULATED TIP JACK

### ACCEPTS .080" TIP

Quality, precision machined tip jack made from brass. Ideal for use on metal panels where grounding is required. Fits panels up to 3/8" thk. Complete with hex nut.



Nickel Plated Brass.  
Bronze contact  
Rating: 15 Amps.

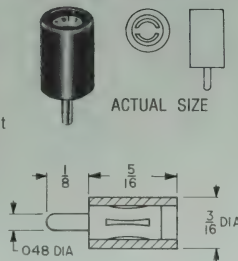
CAT. NO. 6097



## VERTICAL P.C. TEST JACK

### ACCEPTS .080" TIP.

This low profile vertical jack allows dense packaging where space is limited. Mounts into a .052" diameter hole. Provides easy access and positive electrical contact. The contact is recessed to prevent accidental shorting. Capacitance between two adjacent jacks less than 1.0 pF at 1 MHz. Operating voltage is 1500 volts RMS. Current rating 5 amps max.



ACTUAL SIZE

### SELECTION OF COLORS

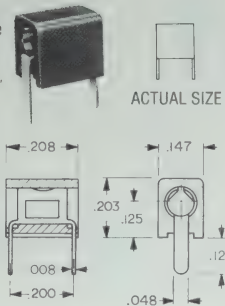
CAT. NO.	COLOR
6036	WHITE
6037	RED
6038	BLACK
6039	YELLOW
6040	GREEN
6041	BLUE

**MATERIAL SPECIFICATIONS**  
**BODY:** NYLON PER ASTM D4066  
**CONTACT:** BERYLLIUM COPPER SILVER PLATED.

## MINIATURE HORIZONTAL P.C. TEST JACK

### ACCEPTS .080" TIP.

Space saver test jack designed for use where space is a limiting factor. Half the size of standard jacks. Accepts .080" tip plug in either end. Mounts on .200" centers in .052" holes. Can be spaced side by side on .160" centers minimum. Two common terminals. Current rating: 5 amps. Breakdown voltage: 3000 volts D.C. Capacitance 1.0 pF.



ACTUAL SIZE

### SELECTION OF COLORS

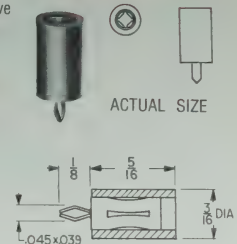
CAT. NO.	COLOR
6048	WHITE
6049	RED
6050	BLACK
6051	YELLOW
6052	GREEN
6053	BLUE

**MATERIAL SPECIFICATIONS**  
**BODY:** NYLON PER ASTM D4066  
**CONTACT:** FORMED BERYLLIUM COPPER SILVER PLATED.

## SNAP-IN P.C. VERTICAL TEST JACK

### ACCEPTS .080" TIP. SNAP-FITS INTO .052" HOLE.

Low cost, compact and dependable snap-in vertical test jack features a unique spring shank which retains the jack throughout wave soldering procedure. Ideal for use on circuit boards of audio, digital and R.F. circuitry. Contact recessed to prevent accidental shorting. Current rating: 5 amps. Operating voltage 1500 volts RMS. Capacitance between two adjacent jacks less than 1.0 pF at 1 MHz.



ACTUAL SIZE

### SELECTION OF COLORS

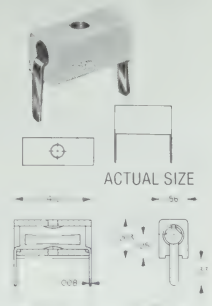
CAT. NO.	COLOR
6042	WHITE
6043	RED
6044	BLACK
6045	YELLOW
6046	GREEN
6047	BLUE

**MATERIAL SPECIFICATIONS**  
**BODY:** NYLON PER ASTM D4066  
**CONTACT:** MACHINED BERYLLIUM COPPER SILVER PLATED.

## UNIVERSAL HORIZONTAL P.C. TEST JACK

### ACCEPTS .080" TIP.

This universal design accepts .080" tip plug in either end, or from top or bottom. Top contact will also accept hook-type oscilloscope probe. Two common terminals. Current rating: 5 amps. Breakdown voltage: 3000 volts D.C. Capacitance 1.0 pF. Mounts on .400" centers in .052" holes. Side by side mounting on .160" centers.



ACTUAL SIZE

### SELECTION OF COLORS

CAT. NO.	COLOR
6054	WHITE
6055	RED
6056	BLACK
6057	YELLOW
6058	GREEN
6059	BLUE

**MATERIAL SPECIFICATIONS**  
**BODY:** NYLON PER ASTM D4066  
**CONTACT:** BERYLLIUM COPPER SILVER PLATED

## LOW PROFILE HORIZONTAL P.C. TEST JACK

### ACCEPTS .080" TIP.

This low profile double-entry design is recognized for its dependability, and allows dense packaging on .160" centers. Side by side mounting. Closed entry design will not accept tips larger than .084", and will accept probes of .074" minimum diameter. Reliability is designed into this rugged low cost jack. Mounts on .400" centers in .052" holes. Current rating: 5 amps. W.V.A.C. 1500 volts max. Contact resistance 0.01 ohms maximum.

**MATERIAL SPECIFICATIONS**  
**BODY:** NYLON PER ASTM D4066  
**CONTACT:** BERYLLIUM COPPER, SILVER OR GOLD PLATED

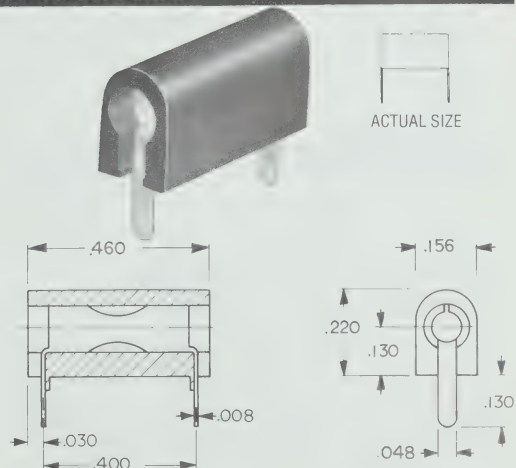
### CHOICE OF GOLD OR SILVER PLATED CONTACTS

#### WITH GOLD PLATING SELECTION OF COLORS

CAT. NO.	COLOR
6060	WHITE
6061	RED
6062	BLACK
6063	YELLOW
6064	GREEN
6065	BLUE

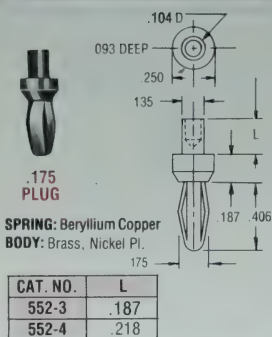
#### WITH SILVER PLATING SELECTION OF COLORS

CAT. NO.	COLOR
6066	WHITE
6067	RED
6068	BLACK
6069	YELLOW
6070	GREEN
6071	BLUE

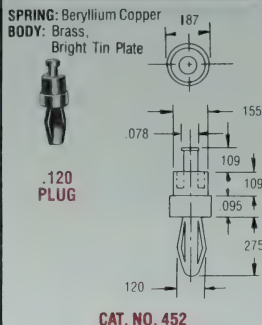


ACTUAL SIZE

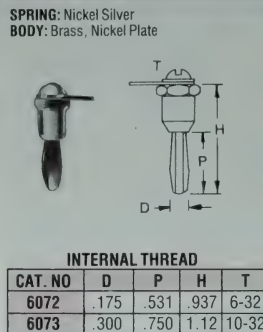
## NON-INSULATED BANANA PLUG



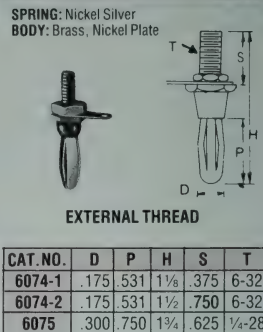
## NON-INSULATED BANANA PLUG



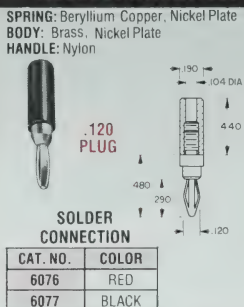
## NON-INSULATED BANANA PLUG



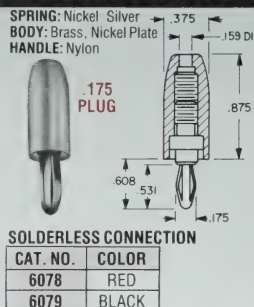
## NON-INSULATED BANANA PLUG



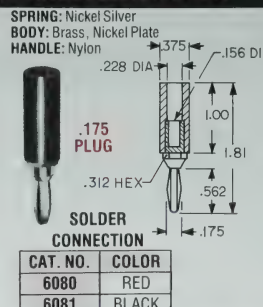
## INSULATED BANANA PLUG



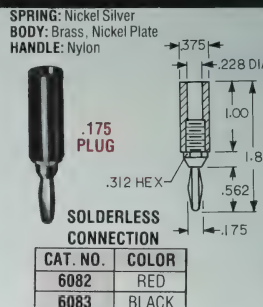
## INSULATED BANANA PLUG



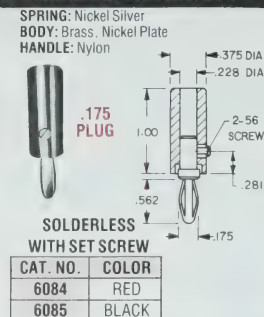
## INSULATED BANANA PLUG



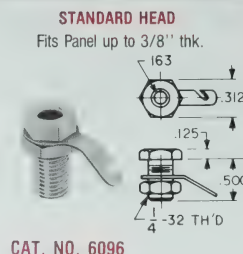
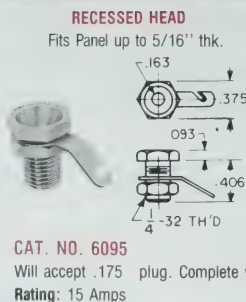
## INSULATED BANANA PLUG



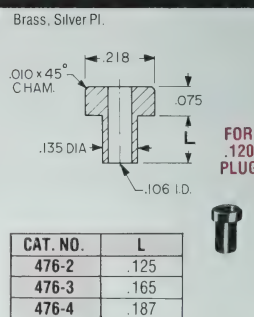
## INSULATED BANANA PLUG



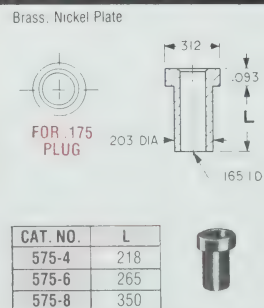
## NON-INSULATED BANANA JACKS



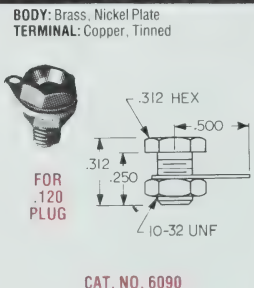
## NON-INSULATED BANANA JACK



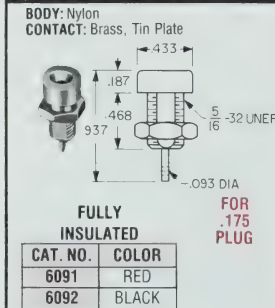
## NON-INSULATED BANANA JACK



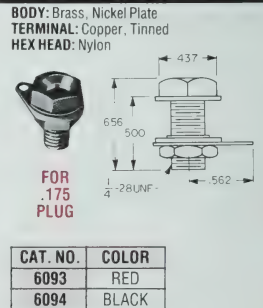
## NON-INSULATED BANANA JACK



## INSULATED BANANA JACK



## INSULATED BANANA JACK





# PHONE TIPS AND TEST PRODS

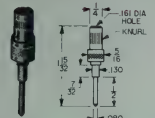
KEYSTONE



TIPS: BRASS MIL SPEC. QQ-B-626A COMP. 22-1/2 HARD. NICKEL PLATED • **RATING:** 12 Amps AC for 10°C Temp. rise, continuous duty. • **HANDLE:** Molded plastic in colors RED or BLACK 3/8" O.D. x 3/16" I.D.

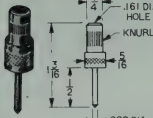
## FORCE FIT SOLDERLESS PHONE TIPS

### SENIOR



CAT. NO. 1690

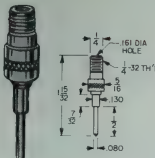
### JUNIOR



CAT. NO. 1680

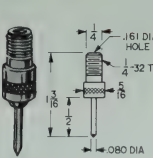
## THREADED SOLDERLESS PHONE TIP

### SENIOR



CAT. NO. 1691

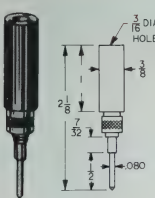
### JUNIOR



CAT. NO. 1681

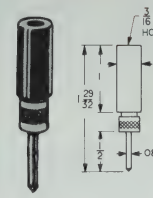
## INSULATED SOLDERLESS PHONE TIP

### SENIOR



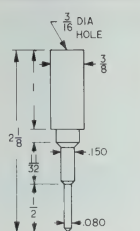
CAT. NO. 1660 RED  
CAT. NO. 1661 BLK

### JUNIOR

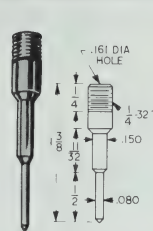


CAT. NO. 1670 RED  
CAT. NO. 1671 BLK

## HEAVY DUTY PHONE TIPS



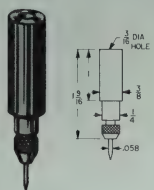
CAT. NO. 3017 RED  
CAT. NO. 3018 BLK



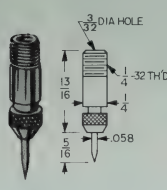
CAT. NO. 3019

## PHONO NEEDLE CHUCK TIP

Chuck removable for easy replacement. Needle pierces plating for positive contact.



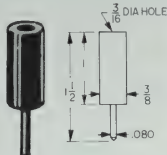
CAT. NO. 3015 RED  
CAT. NO. 3016 BLK



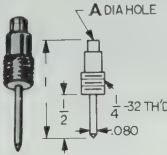
CAT. NO. 3014

## STREAMLINE PHONE TIPS

No metal exposed. Large well for soldering.



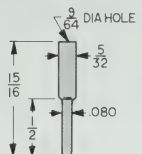
CAT. NO. 1615 RED  
CAT. NO. 1616 BLK



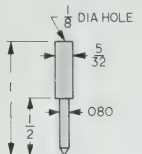
CAT. NO.	A
3022-12	.120
3022-20	.093

## STANDARD PHONE TIPS

Ideal replacement tip for headset, speaker, or extension cord. 1601 Tip accommodates heavier wire.



CAT. NO. 1600



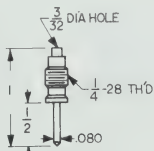
CAT. NO. 1601

## THREADED PHONE TIP

Threads into handle; minimum metal exposed when inserted into jack.



CAT. NO. 3020



## TEST PRODS

Fig. 1 Handle - with tip #3022-20

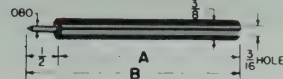


Fig. 2 Handle - with tip #1691

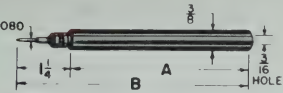


Fig. 3 Handle - with tip #3014

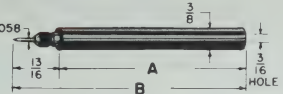
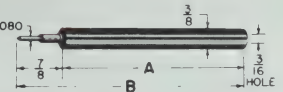


Fig. 4 Handle - with tip #3021



Cat. No.	Fig. No.	Handles Only Color	"A" Dim. Inches	"B" Overall Length Inches
1840		Red	4	5 1/4
1841	2	Black	4	5 1/4
1842		Red	5 1/2	6 1/4
1843	2	Black	5 1/2	6 1/4
1849		Red	4	4 7/8
1850	3	Black	4	4 7/8
1851		Red	5 1/2	6 1/4
1852	3	Black	5 1/2	6 1/4
1850		Red	4	4 7/8
1861	4	Black	4	4 7/8
1862		Red	5 1/2	6 3/8
1863	4	Black	5 1/2	6 3/8
1898		Red	4	4 1/2
1900	1	Black	4	4 1/2

MODIFICATIONS AVAILABLE - with different handles and tip combinations.

## CONTACT PINS (seamless)

PINS FOR 3 .32-1.8 & 5 .32 CONTACTS.



These Pins can be staked to 1/16" or 3/32" Insulator.

**MATERIAL:** Brass & Nickel Plated

CAT. NO.	A	B
1223	.093	.293
1224	.093	.357
1226	.093	.437
1200	.125	.379
1210	.125	.566
1230	.156	.379
1231	.156	.566



**KEYSTONE**

# PHONO PLUGS AND JACKS

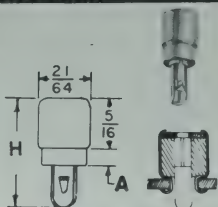
**Material:** Shells: Steel, Cad. Plate **Pins:** Brass N.P. **Contacts:** Brass Cad. Plate

**Note:** All jacks on this page mate with 1/16" diameter pins.

## RIVET TYPE PHONO JACK

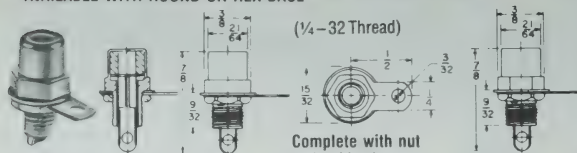
Rivet type - mounts in .296 diam. Hole.  
Available for material 1/16, 3/32 or 1/8 thick

CAT. NO.	A	H	For Insulator
568	.078	.656	1/16"
569	.109	.812	3/32"
570	.140	.812	1/8"



## PANEL MOUNT PHONO JACK

AVAILABLE WITH ROUND OR HEX BASE



Complete with nut and solder lug.

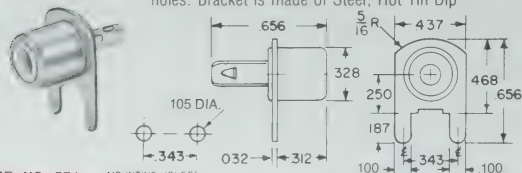
CAT. NO. 574 - Round Base type.

CAT. NO. 576 - Hex Base type.

Mounts on top of panel in .296 diam. hole.

## PRINTED CIRCUIT PHONO JACK

Mounted on bracket ready for insertion into pre-drilled holes. Bracket is made of Steel, Hot Tin Dip

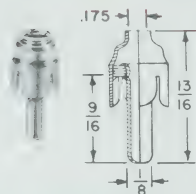


CAT. NO. 571

(MOUNTING HOLES)

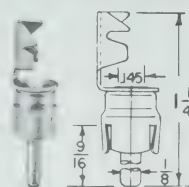
## STANDARDIZED PHONO-PLUGS

Conventional Type



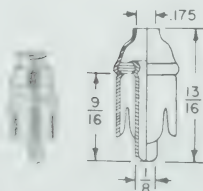
CAT. NO. 561

Strain Relief Lug  
Crimps to Wire Insulation



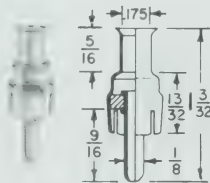
CAT. NO. 565

Longer Skirt  
for Better Grip.



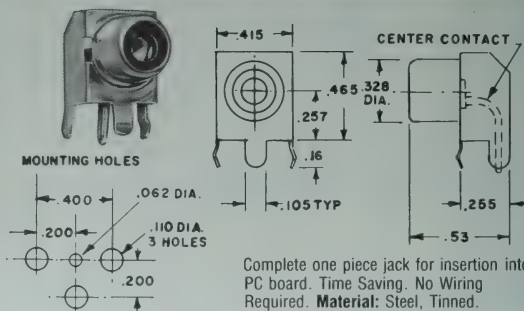
CAT. NO. 566

Crimp or Solder Type.  
Extra Long Handles



CAT. NO. 567

## PRINTED CIRCUIT PHONO JACK

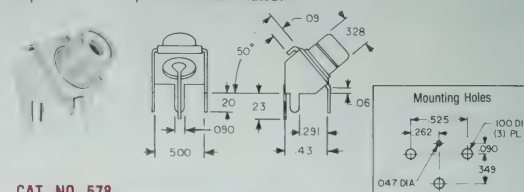


Complete one piece jack for insertion into PC board. Time Saving. No Wiring Required. **Material:** Steel, Tinned.

CAT. NO. 901

## 50° PRINTED CIRCUIT PHONO JACK

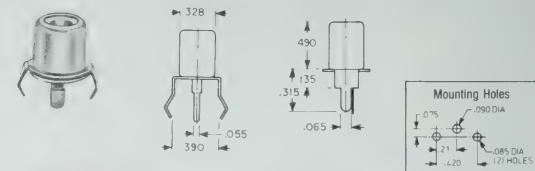
Angle makes for easy access for inserting plug. Mounts directly to PC boards. Accepts .125" Dia. pins. Cadmium Plated.



CAT. NO. 578

## PRINTED CIRCUIT PHONO JACK

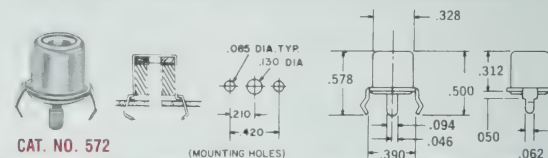
Extra long, one piece shell to accept plugs with longer pins for greater contact. Accepts .125" Dia. pins. Cadmium Plated.



CAT. NO. 577

## PRINTED CIRCUIT PHONO JACK

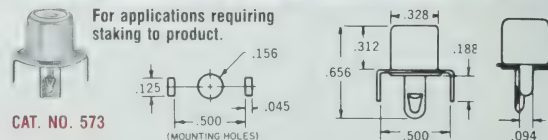
3 hole mounted - snaps into holes and firmly held. No staking required



CAT. NO. 572

## PRINTED CIRCUIT PHONO JACK

For applications requiring staking to product.



CAT. NO. 573



# BINDING POSTS/DUAL PLUGS

KEYSTONE



**MATERIALS AND SPECIFICATIONS FOR THIS PAGE** Special features of these binding post are that they have high current rating, captive thumb nuts, U.L. approved nylon that is self-extinguishing, and anti-rotation stud mounting. Ideal for audio circuitry, R.F. circuitry, oscilloscopes, power supplies, and various other applications.

**MATERIAL: STUDS:** Brass PER QQ-B-626 Finishes as shown: Gold over nickel. Bright tin over nickel. Silver or nickel.

**INSULATING MATERIAL:** Nylon per ASTM D4066

## STANDARD MIL-TYPE BINDING POST

FOR PANELS FROM .062" TO .188" THICK  
CHOICE OF GOLD OR BRIGHT TIN PLATING.

WITH GOLD PLATING

CAT. NO.	COLOR
7008	RED
7009	BLACK

WITH BRIGHT TIN

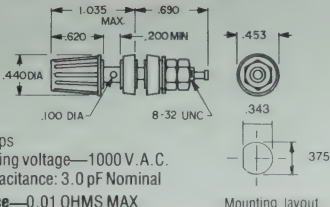
CAT. NO.	COLOR
7010	RED
7011	BLACK



WILL ACCEPT  
.175" PLUG

### RATINGS:

Current—15 amps  
Continuous working voltage—1000 V. A. C.  
Stud to panel capacitance: 3.0 pF Nominal  
Contact resistance—0.01 OHMS MAX



## STANDARD BINDING POST

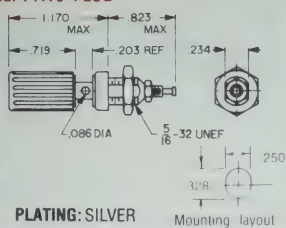
WILL ACCEPT .175" PLUG

FOR PANELS  
UP TO .281" THICK

CAT. NO.	COLOR
7004	RED
7005	BLACK

### RATINGS:

Current—15 amps  
Breakdown voltage—8000 V. D. C.  
Stud to panel capacitance—3.3 pF Nominal.



PLATING: SILVER

## MINIATURE BINDING POST

FOR PANELS UP TO .156" THICK  
CHOICE OF TWO STYLES—FOR .080" TIP PLUG—FOR .120" BANANA PLUG

FOR .080" TIP PLUG

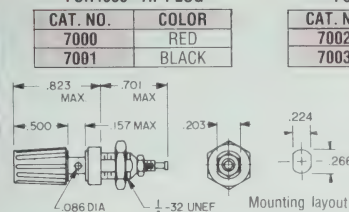
CAT. NO.	COLOR
7000	RED
7001	BLACK

FOR .120" PLUG

CAT. NO.	COLOR
7002	RED
7003	BLACK

### RATINGS:

Current—5 amps  
Breakdown voltage 5000 V. D. C. Stud to panel capacitance: 2.0 pF Nominal  
Contact Resistance: 0.010 OHMS MAX.



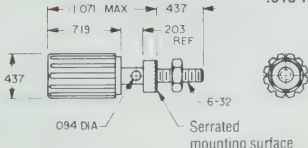
PLATING: SILVER

CONTACT SPRING: Beryllium copper per QQ-C-533

## ECONOMY BINDING POST

WILL ACCEPT .175" PLUG

FOR PANELS UP TO  
.313 THICK



INSULATED THUMB NUT

CAT. NO.	COLOR
7006	RED
7007	BLACK

PLATING: NICKEL

CURRENT RATING: 15 AMPS

## STANDARD U.L.-TYPE BINDING POST

FOR PANELS FROM .062" TO .188" THICK  
MEETS U.L.-1244, I.E.C. 348.P AND C 39.5-1974 FOR DISTANCE  
OF THUMB NUT OPENING.

CHOICE OF GOLD OR BRIGHT TIN PLATING.

WITH GOLD PLATING

CAT. NO.	COLOR
7012	RED
7013	BLACK

WITH BRIGHT TIN

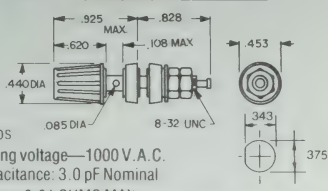
CAT. NO.	COLOR
7014	RED
7015	BLACK



WILL ACCEPT  
.175" PLUG

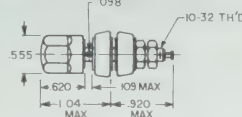
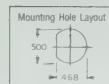
### RATINGS:

Current—15 amps  
Continuous working voltage—1000 V. A. C.  
Stud to panel capacitance: 3.0 pF Nominal  
Contact resistance—0.01 OHMS MAX



## INSULATED 30 AMP BINDING POST

"D" Washer prevents turning. Accepts Banana Plugs, Tips, Spade Lugs, Allig. Clips and Wires. For panels up to 1/4". Gold Plated turret terminal. Head and washers made of Nylon 66 per ASTM D4066.

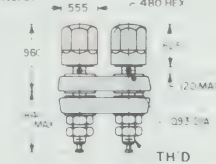


CAT. NO.	COLOR
7016	RED
7017	BLACK

Rating: 30 Amps  
Cont. Working Voltage: 1000 VAC.  
Stud-to-Panel C: 5.0 pF nominal.  
Resistance: 0.010 MAX

## DUAL BINDING POST

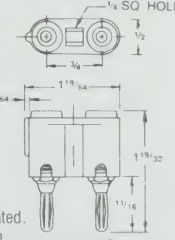
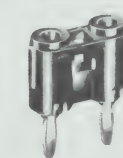
Accepts single or dual Banana Plugs. Cross slotted insulator, molded black Styrene. Accepts phone tips in any position. Supplied with hex nuts and washers. For panels up to 1/4" thick, mounts on 3/4" centers.



CAT. NO.	THREAD
7018	8-32
7019	10-32

Material: Brass, Tin Plated.  
Heads: Molded Polycarbonate, 1 Red - 1 Black.  
Cont. Working Voltage: 2000 VAC  
Stud-to-Panel C: 3.0 pF nominal

## DUAL BANANA PLUGS



SOLDERLESS

CAT. NO.	COLOR
6086	RED
6087	BLACK

SOLDERLESS WITH  
SET SCREW

CAT. NO.	COLOR
6088	RED
6089	BLACK

Spring: Nickel Silver.  
Body: Brass, Nickel Plated.  
Insulator: Molded Nylon.



**KEYSTONE**

# SEMICONDUCTOR SOCKET MOUNTING KITS

## ● LABOR SAVING ● EASIER MOUNTING TO CHASSIS ● BETTER THERMAL EFFICIENCY

An improved, simpler, less costly method of semiconductor mounting. Avoid soldering directly to the semiconductor. Easier to service, economical, more efficient.

### ORDERING INFORMATION - COMPLETE KITS OR INDIVIDUAL HARDWARE

Purchase the complete kit by catalog number as shown OR individual items in minimum 100 piece packages. Keystone does not supply semiconductors.

### MATERIAL SPECIFICATIONS

**Phenolic:** XP grade per Federal L-P-509, Type 1, Form S.

**Socket Contact:** Brass QQ 626, Comp. 22.

**Cadmium Pl.** QQ-P-416 Type 2.

**Nylon:** 101 per ASTM D4066

**Screws:** Steel, Type B, 4-40 or 6-20 as required

**Collector Plate:** Steel .030 Thick, Cadmium Plate.

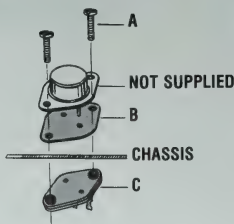
### SOCKET MOUNTING FOR TO-3 CASE

The socket and transistor are assembled without previous attachment to the chassis. Contacts are spaced .430 apart and accept the pins of the semiconductor easily and hold securely. Bosses on top plate are .045 high.

Item	Cat. No.	Description	Quan.
A	4706	6-20 screws	2
B	4651	Mica Insulator	1
C	4602	socket	1

Complete Mounting Kit  
(includes all of the above)

**Cat. No. 4732**



### SOCKET MOUNTING FOR TO-66 CASE

Construction of this socket is similar to the TO-3 socket but it is much smaller in size and contacts are spaced on .200 centers.

.045 high boss on the nylon top eliminates the need of washers or bushings.

Item	Cat. No.	Description	Quan.
A	4706	6-20 screws	2
B	4666	Mica Insulator	1
C	4612	Socket	1

Complete Mounting Kit  
(includes all of the above)

**Cat. No. 4736**

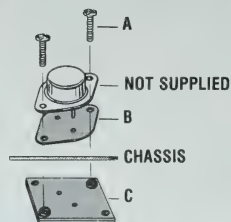
### SOCKET MOUNTING FOR TO-3 CASE

These sockets are pre-assembled to the chassis by either eyelets or rivets. Spacing of contacts is .430 centers. The .045 high boss on the nylon top eliminates the need of washers or bushings.

Item	Cat. No.	Description	Quan.
A	4706	6-20 screws	2
B	4651	Mica Insulator	1
C	4608	Square socket	1

Complete Mounting Kit  
(includes all of the above)

**Cat. No. 4733**



### SOCKET MOUNTING FOR TO-66 CASE

One piece molded nylon top socket compact, low cost, easiest to pre-assemble to chassis. Has .078 High Boss and eliminates the need for washers or bushings. Contacts spaced .200 centers.

Item	Cat. No.	Description	Quan.
A	4697	#4 Screws	2
B	4666	Mica Insulator	1
C	4625	Molded Socket	1

Complete Mounting Kit  
(includes all of the above)

**Cat. No. 4737**

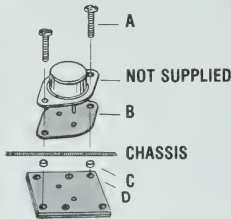
### SOCKET MOUNTING FOR TO-3 CASE

An all phenolic socket that is pre-assembled to the chassis by eyelets or rivets. Spacing and brass contacts .430 centers.

Item	Cat. No.	Description	Quan.
A	4706	6-20 screws	2
B	4651	Mica Insulator	1
C	4684	Nylon Bushings	4
D	4606	Sq. Phenol. Socket	1

Complete Mounting Kit  
(includes all of the above)

**Cat. No. 4734**



### SOCKET MOUNTING FOR TO-66 CASE

All phenolic socket assembled with contacts on .200 centers sturdily constructed for heavy duty usage, pre-assembled to the chassis by eyelets or rivets.

Item	Cat. No.	Description	Quan.
A	4706	6-20 screws	2
B	4666	Mica Insulator	1
C	4684	Spacers	4
D	4615	Socket	1

Complete Mounting Kit  
(includes all of the above)

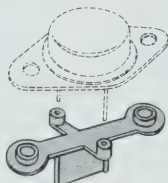
**Cat. No. 4738**

### NYLON POWER TRANSISTOR MOUNT

Barrier insulator, molded of type 6/6 natural colored nylon. functionally replaces up to six pieces of conventional insulation required with previous methods of mounting power transistors. Built-in barrier eliminates need for sleeving of connections.

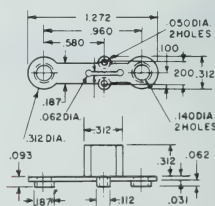
#### FOR TO-3 CASES

**Cat. No. 4616**



#### FOR TO-66 CASES

**Cat. No. 4617**



NOTE: Heavy Duty Insulator made of celanex available. Samples and quote upon request.



## COMPLETE KITS OR INDIVIDUAL HARDWARE • PRE PACKAGED • UNIFORM HARDWARE AT LOW COST

These pre-packaged universal mounting kits provide all the necessary hardware and insulators required to securely mount the semiconductor to the chassis. Purchase the complete kit consisting of all hardware included in one package.

Your choice of individual items available in 100 piece packages. We welcome suggestions for improving these kits and will render prompt quotations for specially packaged hardware.

Keystone does not supply any semiconductors.

### ORDERING INFORMATION:

Individual parts are sold in not less than 100 pieces of an item. Complete kits are ordered by specifying the complete mounting kit catalog number.

#### FOR TO-3 CASE Fig. 1

Item	Cat. No.	Description	Quan.
A	4696	6-32 Screws	2
B	4651	Mica Insulator	1
C	4698	Shoulder Washer	2
D	4699	Metal Washers	2
E	4004	Solder Terminal	1
F	4700	Lockwashers	2
G	4701	6-32 Nuts	2

CAT. NO. 4725  
COMPLETE MOUNTING KIT

Fig. 1

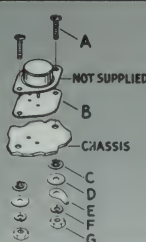
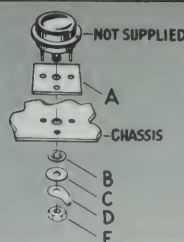


Fig. 2



#### FOR TO-66 CASE Fig. 1

Item	Cat. No.	Description	Quan.
A	4696	6-32 Screws	2
B	4656	Mica Insulator	1
C	4698	Shoulder Washers	2
D	4699	Metal Washers	2
E	4004	Solder Terminal	1
F	4700	Lockwashers	2
G	4701	6-32 Nut	2

CAT. NO. 4726  
COMPLETE MOUNTING KIT

#### FOR TO-36 CASE Fig. 2

Item	Cat. No.	Description	Quan.
A	4656	Mica Insulator	1
B	4702	Shoulder Washer	1
C	4703	Metal Washer	1
D	4704	Solder Terminal	1
E	4705	10-32 Nut	1

CAT. NO. 4727  
COMPLETE MOUNTING KIT

Fig. 3

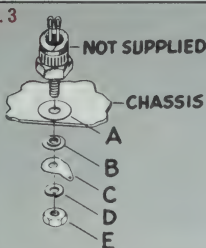
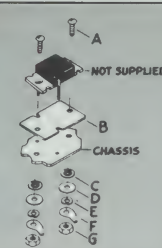


Fig. 4



#### FOR PLASTIC CASE Fig. 4

Item	Cat. No.	Description	Quan.
A	4690	4-40 Screws	2
B	4663	Mica Insulator	1
C	343	Shoulder Washers	2
D	4692	Metal Washers	2
E	4693	Lockwashers	2
F	4695	Solder Terminal	2
G	4694	4-40 Nuts	2

CAT. NO. 4728  
COMPLETE MOUNTING KIT

#### FOR DO-4, TO-59, TO-60, TO-62 CASE Fig. 3

Item	Cat. No.	Description	Quan.
A	4681	Mica Insulator	1
B	4702	Shoulder Washer	1
C	4704	Solder Terminal	1
D	1477	Lockwasher	1
E	4705	10-32 Nut	1

CAT. NO. 4729  
COMPLETE MOUNTING KIT

#### FOR DO-5, TO-48, TO-61 CASE Fig. 3

Item	Cat. No.	Description	Quan.
A	4682	Mica Insulator	1
B	4711	Shoulder Washer	1
C	4712	Solder Terminal	1
D	1476	Lockwasher	1
E	4713	1/4-28 Nut	1

CAT. NO. 4730  
COMPLETE MOUNTING KIT

#### FOR TO-220 CASE Fig. 4

Item	Cat. No.	Description	Quan.
A	4690	4-40 Screws	1
B	4672	Mica Insulator	1
C	3049	Shoulder Washer	1
E	4693	Lockwasher	1
G	4694	4-40 Nuts	1

CAT. NO. 4724  
COMPLETE MOUNTING KIT

#### FOR TO-63 CASE Fig. 3

Item	Cat. No.	Description	Quan.
A	4683	Mica Insulator	1
B	3241	Shoulder Washer	1
D	1485	Lockwasher	1
E	4716	5-16-24 Nut	1

CAT. NO. 4731  
COMPLETE MOUNTING KIT

## POWER TRANSISTOR COVERS

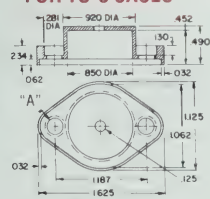


Molded nylon covers easily mount over and insulate the power transistor. Will withstand temperatures to approx 300 deg. F.

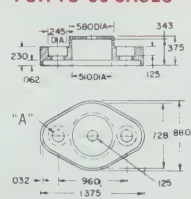
Also available with brass eyelets installed in mounting holes to assure proper electrical contact with collector/case.

CAT. NO.	FOR	EYELETS INSTALLED	I.D. "A"
4632	TO-3	NONE	.210
4634	TO-3	TWO	.140
4633	TO-66	NONE	.155
4635	TO-66	TWO	.130

#### FOR TO-3 CASES



#### FOR TO-66 CASES

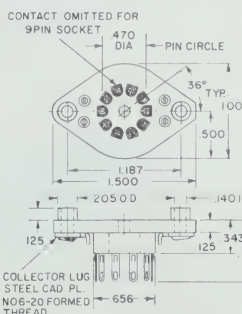


## 9 & 10 PIN SOCKETS FOR VOLTAGE REGULATORS

### MATERIAL SPECIFICATIONS:

**BODY:** Precision molded Glass filled Nylon. Withstand temp. to approx. 340 deg. F.

**CONTACTS:** Brass, Cadmium Plated



These sockets increase thermal efficiency, better electrical performance and eliminate the need of soldering directly to the semiconductor.



9 PIN SOCKET  
CAT. NO. 4630

10 PIN SOCKET  
CAT. NO. 4631

MICA INSULATOR (10 HOLES)  
CAT. NO. 4675

## SPACE SAVER • LABOR SAVING • EASIER SERVICING • SIMPLER MOUNTING • FROM STOCK IMMEDIATELY

Achieve better electrical performance and mechanical sturdiness by using these low cost, compact, rugged sockets. Avoids soldering directly to the semiconductor. Sockets are easier and faster to mount with the least amount of hardware required. Metal parts of the socket are corrosion resistant, and cadmium plated. Spring brass contacts provide very low resistance electrical continuity. Hard steel

collector plates with 6-20 threaded formings at each end engage screws and hold securely with maximum torque of 9 inch/lbs. Various boss heights on the precision molded nylon tops eliminate the need for loose bushings. The nylon tops supplied in various colors.

### MATERIAL SPECIFICATIONS:

COLLECTOR PLATE: Steel tin plated

CONTACTS: .012 thick brass tin plated

Materials: Molded nylon plates per ASTM D4066

Phenolic PBE Grade Natural Color

### MODIFICATIONS AVAILABLE

Variety of stock parts permits fast delivery on special requirements. Use our engineering service.

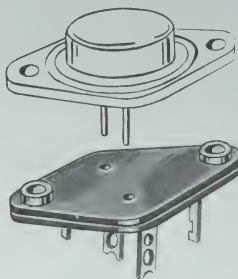
### SPECIAL LUGS

Printed Circuit Lugs

Available on special order.

## GREATER FLEXIBILITY • TIME SAVING • BETTER THERMAL EFFICIENCY • UNIFORM • AVAILABLE FROM STOCK

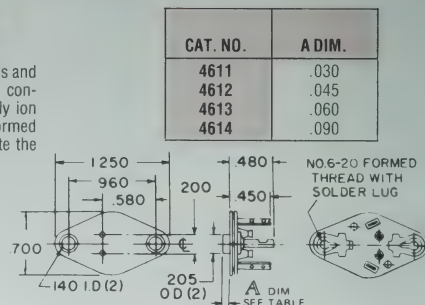
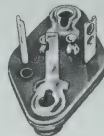
### FOR TO-66 CASE



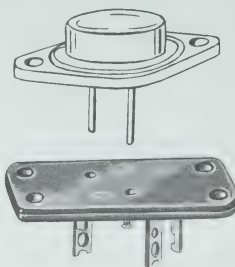
VARIOUS BOSS HEIGHTS  
AVAILABLE FROM STOCK

TOP PLATE: MOLDED NYLON  
BASE: PHENOLIC

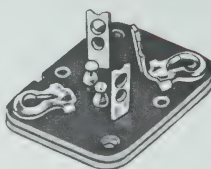
The socket is held underneath the chassis and the semiconductor is inserted into the contacts of the socket holding the assembly in position. The 6-20 screws engage the formed holes in the collector plate and complete the mounting.



### FOR TO-66 CASE

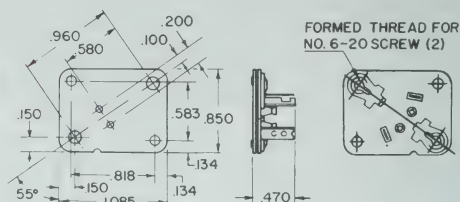


CAT. NO. 4615

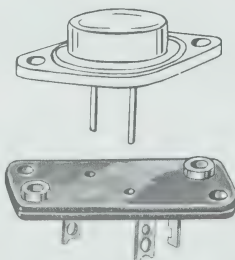


TOP PLATE: PHENOLIC  
BASE: PHENOLIC

Pre-assembling the socket to the chassis by eyelets or rivets permits the installation of the semiconductor at a later stage in the assembly.



### FOR TO-66 CASE

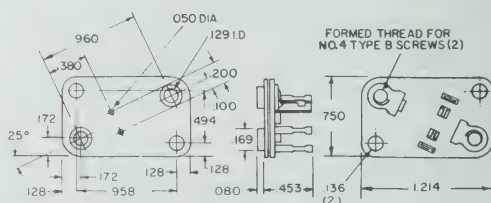


CAT. NO. 4625



TOP PLATE: MOLDED NYLON  
BASE: PHENOLIC

These sockets are pre-assembled to the chassis by either eyelets or rivets. Has .080 High Boss and eliminates the need for washers or bushings.

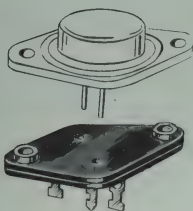




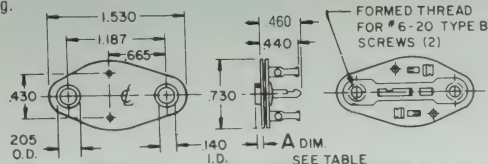
## SOCKETS FOR TO-3 CASE Various Molded Boss Heights

### SOCKETS IN A WIDE SELECTION FOR THE POPULAR TO-3 CASE

The socket is held underneath the chassis and the semiconductor is inserted into the contacts of the socket holding the assembly in position. The 6-20 screws engage the formed holes in the collector plate and complete the mounting.



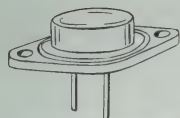
TOP PLATE: MOLDED NYLON  
BASE: PHENOLIC



CAT. NO.	A DIM.
4603	.030
4602	.045
4601	.090

## SOCKETS FOR TO-3 CASE Various Molded Boss Heights

Pre-assembling the socket to the chassis by eyelets or rivets permits the installation of the semiconductor at a later stage in the assembly.



TOP PLATE: MOLDED NYLON  
BASE: PHENOLIC

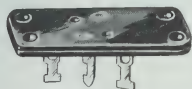
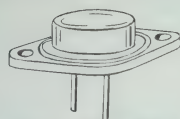


CAT. NO.	A DIM.
4607	.030
4608	.045
4609	.060
4610	.090
4618	.125

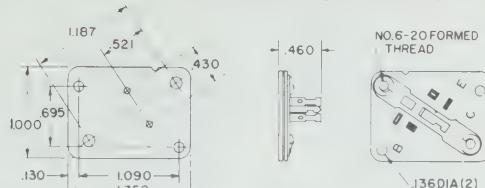
## FOR TO-3 CASE All Phenolic Socket

CAT. NO. 4606

These sockets are eyeletted or riveted to the chassis and use external bushings to insulate the screws in the final mounting. The semiconductor may be installed at the last stage of the assembly.



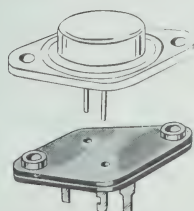
TOP PLATE: PHENOLIC  
BASE: PHENOLIC



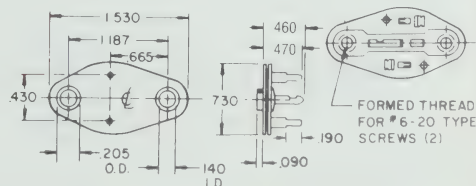
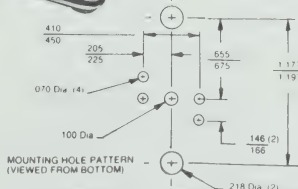
## PRINTED CIRCUIT Socket for TO-3

CAT. NO. 4600

Easily assembles onto printed circuit board. Eliminates wiring. Stops on P.C. terminals provide sufficient spacing between socket and P.C. board to permit proper assembly of transistor to socket. Can be screwed down tightly to heat sink.



TOP PLATE: MOLDED NYLON  
BASE: PHENOLIC



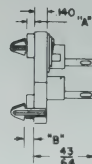
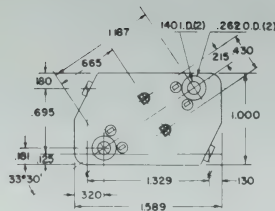
## SNAP-IN SOCKET FOR TO-3

Fully molded compact construction, will Snap-Fit into .040 and .080 thick Heat Sinks or Panels. Speeds assembly of transistors. Will take insertion force of transistor without falling out of position.

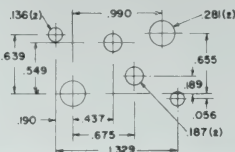
**Material:** Monsanto M340FR (Flame Retardant)

**Collector Lug:** Steel Tin Plate

**Contacts:** Brass Tin Plate



MOUNTING HOLES

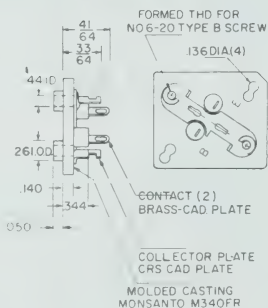
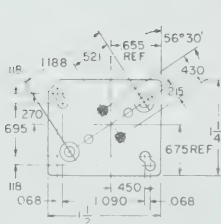


CAT. NO.	"A"	"B"
4599-1	.040	.075
4599-2	.080	.105

## FULLY MOLDED TO-3 SOCKET

Pre-assembling the socket to the chassis by eyelets or rivets permits the installation of the semiconductor at a later stage in the assembly. The molded top boss eliminates hardware.

Ideal where high temperature is incurred. Molded from Monsanto M340FR, this is a Flame Retardant material. Available in various boss heights.



CAT. NO. 4620

## ONE-PIECE ALL MOLDED TRANSISTOR SOCKETS FOR TO-3 CASE

Features an all-in-one mounting plate and solder tabs, providing complete electrical isolation of the solder tab connections, choice of single or dual solder tabs.

**Choice of Single or Dual Collector Solder Tabs**

**Material:** Insulating base glass filled reinforced polyester — 94V-0 rating

**Contacts:** Phosphor bronze tin plate

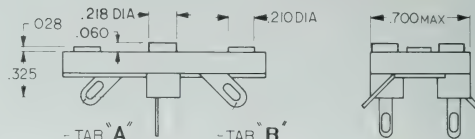
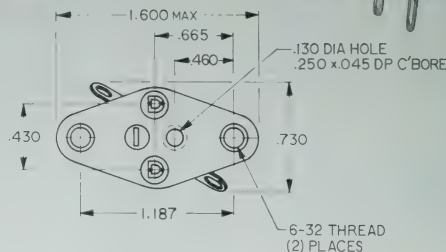
**Mtg. Bracket:** Brass tin plate

Rated 5 amps DC continuous and 15 amps DC intermittent

With transistor lead-in insulating shoulders

**Choice of Single or Dual Tabs**

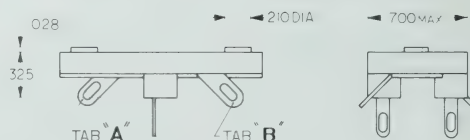
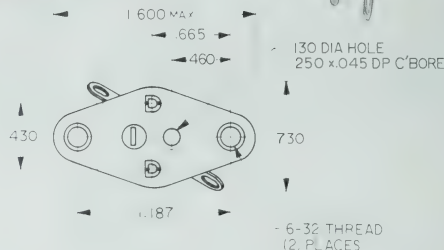
CAT. NO.	WITH TAB
4513	"A" only
4514	"A" & "B"



Less transistor lead-in insulating shoulders

**Choice of Single or Dual Tabs**

CAT. NO.	WITH TAB
4515	"A" only
4516	"A" & "B"





# MICA INSULATORS FOR TRANSISTOR MOUNTING

KEYSTONE



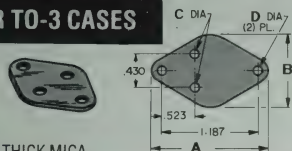
- RAPID HEAT DISSIPATION • HIGH DIELECTRIC STRENGTH • NON-TOXIC • LOW COST • FROM STOCK

These precision stamped mica insulators provide good thermal conductivity (.009 watts per square inch per degree celsius per inch in thickness). Excellent thermal resistance 1100°F. Dielectric constant of 7 at 1000 Kilohertz.

**ORDERING INFORMATION:** Minimum quantity 100 pieces of an item.

**MATERIAL SPECIFICATIONS:** .003 thick mica is used for all the insulators on this page. Tolerance for thickness is plus or minus .001 Special thickness and other materials available on special order. Prompt quotations will be rendered.

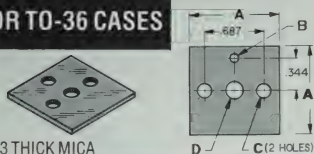
## FOR TO-3 CASES



.003 THICK MICA

CAT. NO.	A	B	C	D
4651	1.625	1.093	.093	.166
4652	1.560	1.050	.203	.171
4653	1.655	1.063	.166	.166
4636	1.655	1.063	.052	.166
4644	1.655	1.063	.270	.166

## FOR TO-36 CASES



.003 THICK MICA

CAT. NO.	A	B	C	D
4655	1.125	.130	.187	.203
4656	1.250	.140	.156	.203



.003 THICK MICA

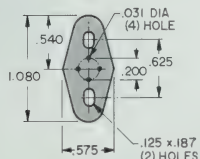
CAT. NO.	A	B	C	D
4657	1.062	.187	.187	.187
4670	1.187	.140	.156	.203
4659	1.187	.187	.187	.250

## FOR TRANSISTOR CASES THREADED STUD

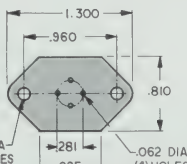


.003 THICK MICA

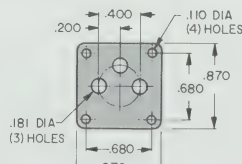
Cat. No.	I.D. Inside Dia.	O.D. Outside Dia.	For Screw Size
4678	.120	.375	4
4679	.140	.375	6
4680	.171	.500	8
4681	.187	.625	10
4682	.265	.750	1/4
4683	.328	.875	5/16



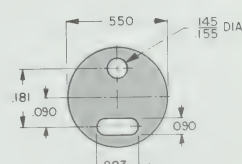
CAT. NO. 4637



CAT. NO. 4640

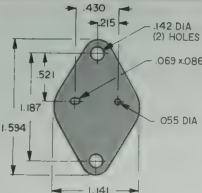


CAT. NO. 4669

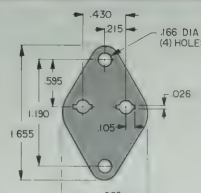


CAT. NO. 4668

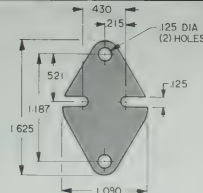
## INSULATORS FOR VARIOUS TO-3 CASES



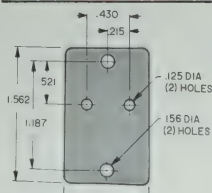
CAT. NO. 4662



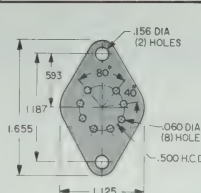
CAT. NO. 4667



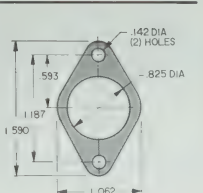
CAT. NO. 4674



CAT. NO. 4661

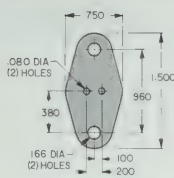


CAT. NO. 4658

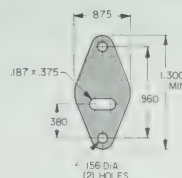


CAT. NO. 4660

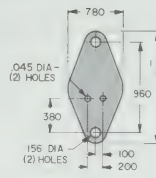
## INSULATORS FOR VARIOUS TO-66 CASES



CAT. NO. 4664

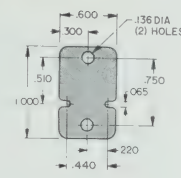


CAT. NO. 4665

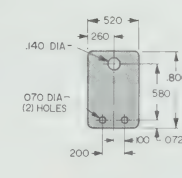


CAT. NO. 4666

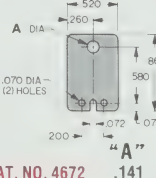
## PLASTIC CASE MICA INSULATORS



CAT. NO. 4663



CAT. NO. 4671



CAT. NO. 4672 .141  
CAT. NO. 4673 .115

**KEYSTONE**

# FUSE CLIPS

PRINTED CIRCUIT/CONVENTIONAL TYPES

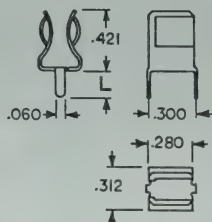
Rugged, durable, makes it less costly to assemble as integral circuit parts. For 5mm and 1/4" (.250) dia. fuses. Low contact resistance. Performance tested. Rating: 15 Amps.

## 1/4" Dia. PRINTED CIRCUIT CLIPS

PC Tabs at each end.

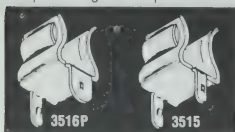
.020 Brass,  
Tin Plated.

CAT. NO.	"L"
3529	.140"
3514	.250"



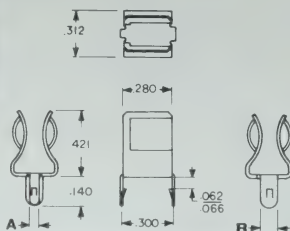
## 1/4" Dia. SNAP-IN PRINTED CIRCUIT CLIPS

Assures correct installation. Available with or without orientation. PC solder tabs. Snap-in design holds position for wave soldering.



.020 Brass, Tin Plated

CAT. NO.	"A"	"B"
3515	.060	.060
3516P	.060	.120



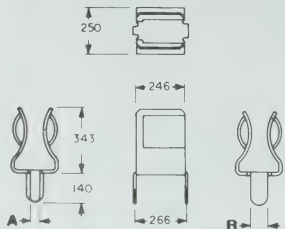
## 5mm PRINTED CIRCUIT CLIPS

Assures correct installation. Available with or without orientation PC solder tabs.



.020 Brass Tin Plated

CAT. NO.	"A"	"B"
3517	.060	.060
3518P	.060	.093

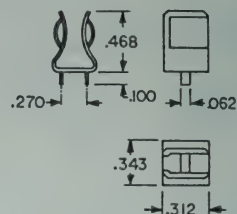


## 1/4" Dia. PRINTED CIRCUIT CLIP

PC Tabs in center.

.020 Brass,  
Tin Plated.

CAT. NO. 3530



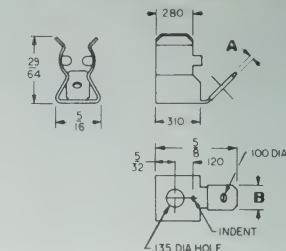
## 1/4" Dia. WITH QUICK-DISCONNECT TAB

One piece construction. Eliminates need for soldering.



Brass, Nickel Plated

CAT. NO.	A	B
4244	.032	.250
4246	.020	.187
4247	.020	.205

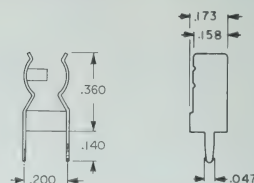


## 5mm PRINTED CIRCUIT CLIP

PC Tabs in center.

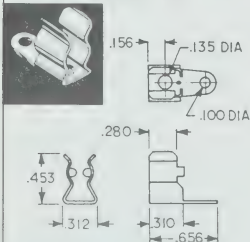
.016 Brass,  
Tin Plated.

CAT. NO. 3519



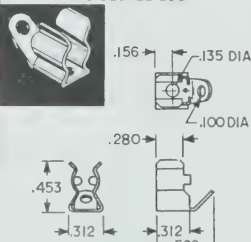
## 1/4" Dia. FUSE CLIP

STRAIGHT LUG

.020 Brass,  
Nickel Plated.  
CAT. NO. 3533

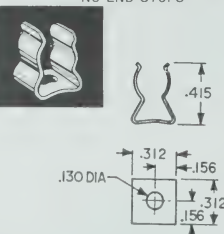
## 1/4" Dia. FUSE CLIP

45 DEGREE LUG

.020 Brass,  
Nickel Plated.  
CAT. NO. 3535

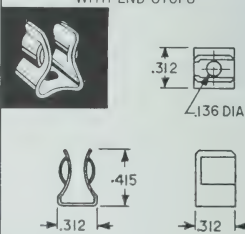
## 1/4" Dia. FUSE CLIP

NO END STOPS

.020 Brass,  
Nickel Plated.  
CAT. NO. 3531

## 1/4" Dia. FUSE CLIP

WITH END STOPS

.020 Brass,  
Nickel Plated.  
CAT. NO. 3532



# 3AG FUSE HOLDERS



Our variety of standard tooling and setups permits us to supply custom fabricated boards on short notice at lower cost.

## MOLDED 3AG FUSE HOLDERS

UL APPROVED MATERIALS—LOW COST—LOW CONTACT RESISTANCE—FLAME RETARDANT

A new improved Fuse Holder for the popular 3 AG fuse. Molded with barriers to prevent flashback and withstand test of 1080 VRMS at 60HZ for 1 minute and 3000 V. DC for 1 minute

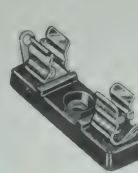
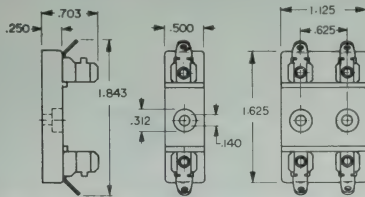
**MATERIAL SPECIFICATIONS:** Clips stamped from Brass alloy type CDA 260 and Bright Dip Plated.

**MOLDED PLASTIC** Mineral filled flame retardant Alkyd. UL rated 94V-0 and conforms to the 180 seconds arc tracking test spec per ASTM 495-D.

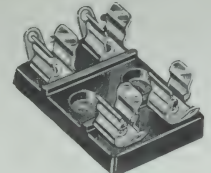
**CONTACT RESISTANCE:** Will not exceed 50 mili-ohms before and after being in an atmosphere of 100% R.H. at 65 deg. C for 48 hours, then air dried for 1 hour

**STANDARD STOCK** Blocks are assembled with our #3535 fuse clip. Bright Dip Plated, Black plastic base

**MODIFICATIONS:** We will substitute any clips of your choice assembled to these bases. Quotation will be promptly rendered.



CAT. NO. 3523



CAT. NO. 3524

## FUSE HOLDERS FOR 3 AG FUSES

**BLACK PHENOLIC:** NEMA GRADE XXXP - FED. LP-513, paper base electrical phenolic Max. operating temp. continuous 250 deg. F. .125 thick

**FIBERGLASS:** Fiberglass Reinforced Polyester NEMA Grade. GPO-3 with a 155°C (300°F) Temp. 94V-0 rating. .125 thick

**CLIPS:** Brass, Nickel Plated.



Assembled with Clip No. 3535				
BLACK PHENOLIC CAT. NO.	FIBER-GLASS CAT. NO.	HOLDS NO. OF FUSES	FIG. NO.	A
3536	3540	1	1	.500
3537	3541	2	2	1.125
3538	3542	3	2	1.750
3539	3543	4	2	2.375

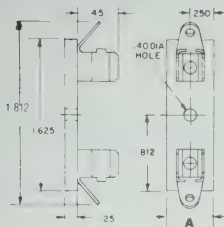


FIG. 1

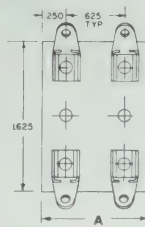


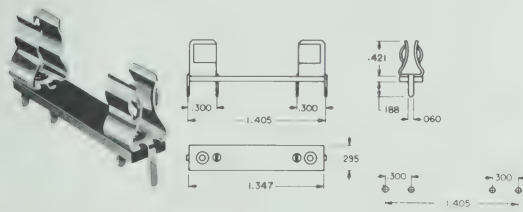
FIG. 2

## PRINTED CIRCUIT FUSE HOLDER

For 1/4" diameter fuse 3AG. Ideal for use where space is a factor. Economical & compact. Provides greater mechanical strength than individual clips. Increase production as contacts are excellent for wave soldering.

**MATERIAL:** 062 GPO-3, 94V-0

**CLIPS:** Brass, Tin Plate



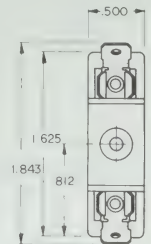
CAT. NO. 4245

MOUNTING DETAIL

## QUICK DISCONNECT FUSE HOLDER

FOR 1/4" (.250) DIAMETER FUSES.

Quick-disconnect eliminates the need for soldering. Fuse clip is one piece construction. Tab is .250 wide by .032 thick. Brass, Nickel Plated.



**BASE:** Molded Plastic. flame retardant. UL rated 94V-0

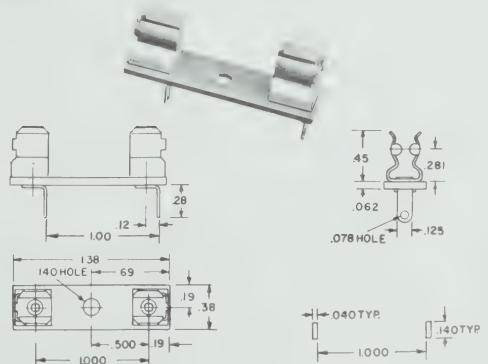
CAT. NO. 4243

## FUSE HOLDER FOR 3 AG FUSES

Leads are terminated on the bottom of strip. Ideal for use where space is a factor. Excellent for printed circuit boards. No wiring required

**Material:** 062 GPO-3, 94V-0

**Plating:** Terminals and Clips Tinned



CAT. NO. 3526

MOUNTING DETAIL

## COMPONENT CARRIERS

Designed for mounting discrete components such as resistors, capacitors, diodes and other electronic components. Carriers plug directly into panel boards or sockets.

### FEATURES

#### ★ FLAME RETARDANT EPOXY GLASS BASE

- will not degrade during soldering or cleaning

#### ★ SCREW MACHINE CONTACTS

- contact replaceability
- slotted pin style
- gold over nickel plated

### MATERIAL:

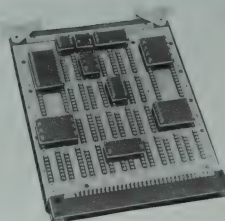
**BASE:** Laminated glass epoxy .062" thick

**TERMINAL:** Brass, gold over nickel plated

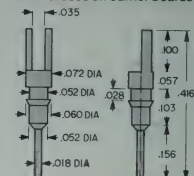
ALSO AVAILABLE WITH TIN PLATED TERMINALS ON SPECIAL ORDER ONLY.

### ★ VARIETY

- Contact row spacing of .300", .600", .800"
- Contacts on .100", .200" and .300" centers.

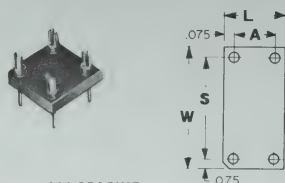


### SLOTTED PIN STYLE Terminal used on Carrier Boards

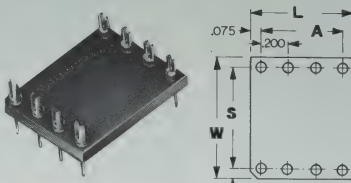


**CAT. NO. 7100**

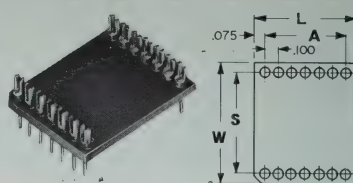
Terminal Only



**FIG. 1** .300 SPACING



**FIG. 2** .200 SPACING



**FIG. 3** .100 SPACING

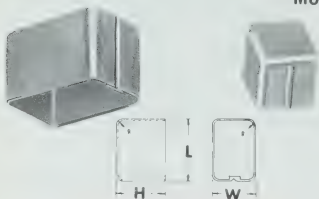
FIG	CATALOG NUMBER	NO. OF PINS	ROW SPACING S	A	LENGTH L	WIDTH W
3	7110	8	.300	.300	.450	.450
1	7111	4	.300	.300	.450	.450
3	7112	14	.300	.600	.750	.450
2	7113	8	.300	.600	.750	.450
3	7114	8	.800	.300	.450	.950
1	7115	4	.800	.300	.450	.950
3	7116	14	.800	.600	.750	.950

FIG	CATALOG NUMBER	NO. OF PINS	ROW SPACING S	A	LENGTH L	WIDTH W
2	7120	8	.800	.600	.750	.950
3	7121	18	.600	.800	.950	.750
2	7122	10	.600	.800	.950	.750
3	7123	24	.600	1.100	1.250	.750
2	7124	12	.600	1.000	1.250	.750
3	7125	16	.300	.700	.850	.450
3	7126	16	.800	.700	.850	.950

## HEADERS AND SOCKETS

### FOR MINIATURE AND SUBMINIATURE CIRCUITS

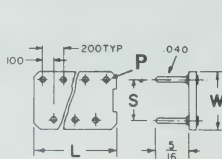
MODULES • TRANSFORMERS • MAXIMUM DENSITY OF PACKAGING



### MOLED DELRIN® PLASTIC CASES

Hi impact Cases suitable for circuits requiring encapsulation. Plastic will withstand 320°F or 160°C continuous operation.

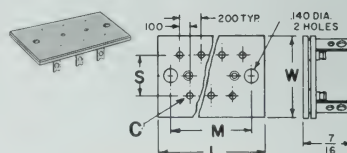
\*Reg. TM by Dupont



◀ WITH ▶

### MATING HEADERS (Polarized)

Materials 1/16" thick Glass Epoxy MIL-P-18177B. Pins are Hollow Brass, Electro Tinned for easy soldering. They will accept a #20 size wire .200 spacing between pins.



◀ AND ▶

### MATING SOCKETS (Polarized)

Material is 1/16" thick Glass Epoxy MIL-P-18177B. Contacts are .012 thick Brass and Cadmium plated. Precision made to closest tolerances and mate with the headers perfectly.

CASE CAT. NO.	W WIDTH	L LENGTH	H HEIGHT
4293	.359	.500	.404
4294	.562	.578	.578
4295	.609	.859	.656
4296	.593	.984	.656
4289	.734	1.015	.531
4290	.734	1.015	.718
4291	.920	1.305	.910
4292	1.250	1.687	1.281

HEADER CAT. NO.	W WIDTH	L LENGTH	S	P PINS EACH SIDE
4297	.300	.437	.187	2 & 1
4298	.500	.515	.187	2 & 1
4299	.546	.781	.375	4 & 3
4300	.531	.937	.375	5 & 4
4301	.687	.937	.500	5 & 4
4301	.687	.937	.500	5 & 4
4303	.843	1.203	.600	6 & 5
4304	1.156	1.578	.812	7 & 6

SOCKET CAT. NO.	W	L	S	C No. of Contacts	Mfg. Holes M
4305	.500	.625	.187	2 & 1	Opposite Ends
4305	.500	.625	.187	2 & 1	.390x437
4307	.781	1.000	.375	4 & 3	.750
4308	.781	1.062	.375	5 & 4	.812
4309	.922	1.062	.500	5 & 4	.812
4309	.922	1.062	.500	5 & 4	.812
4311	1.062	1.421	.600	6 & 5	1.125
4312	1.375	1.812	.812	7 & 6	1.500



# PLASTIC PLUG-IN HOUSINGS AND HEADERS



## PLUG-IN HOUSINGS

Enhance the appearance and give a professional look to your products using these molded housings. Ideally suited for packaging relays, logic packages, networks and miniature circuitry. Durable, lightweight covers withstand vibrations and rough usage.

**HEADERS:** Molded of G. P. black phenolic. Fits standard sockets.

**PINS:** Brass, Nickel Plated.

### MATERIAL CHARACTERISTICS:

- Variety of molded materials
- Good chemical resistance

**POLYSTYRENE:** For general purpose use where high impact strength is not required and temperature would not exceed 170° F.

**LEXAN:** 3 Times the impact strength of Polystyrene. Excellent electrical properties. Use wherever temperatures of 280° F exist.

**NYLON:** Impact strength slightly less than Lexan. Recommended for use where temperatures are as high as 300° F.

Housing with Octal Header & 4 Screws CAT. NO.	Housing Only CAT. NO.	Fig. No.	Type	Material	Color
660	670	1	Mini	Lexan	Clear
661	671	1	Mini	Lexan	White
662	672	1	Mini	Polystyrene	Clear
641	645	1	Mini	Polystyrene	Opaque Black
—	—	—	—	—	—
663	673	2	Small	Lexan	Clear
664	674	2	Small	Lexan	White
665	676	2	Small	Polystyrene	Clear
643	647	2	Small	Polystyrene	Opaque Black
—	—	—	—	—	—
650	649	3	Large	Lexan	Clear
668	679	3	Large	Polystyrene	Clear
677	666	3	Large	Polystyrene	Opaque Black
—	—	—	—	—	—
639	640	4	Xtra-L'ge	Polystyrene	Clear
710	711	4	Xtra-L'ge	Polystyrene	Opaque Black
712	713	4	Xtra-L'ge	Lexan	Clear

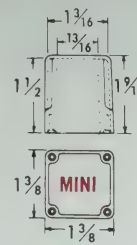


FIG. 1

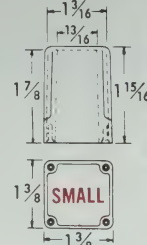


FIG. 2

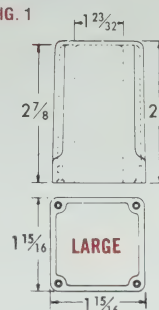
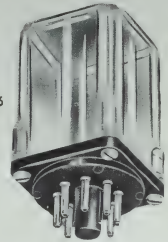


FIG. 3

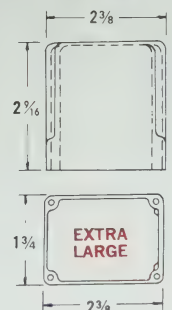


FIG. 4

## HEADERS FOR THE ABOVE HOUSINGS

**HEADERS:** Headers are available in a variety of pin configurations that fit standard sockets. Molded of general purpose phenolic with brass nickel plated pins sturdily staked.

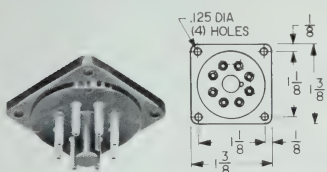


FIG. 1

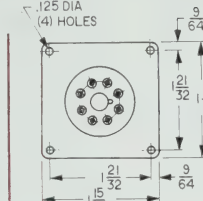


FIG. 2

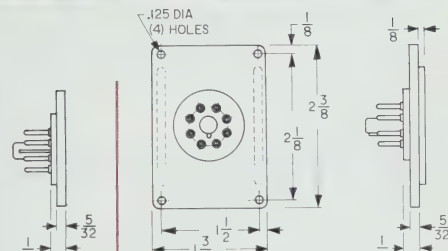


FIG. 3

1 1/4 Sq. Headers for Mini & Small Housing (Fig. 1 Above) CAT. NO.	Pin Configuration	1 1/4 Sq. Headers for Large Housing (Fig. 2 Above) CAT. NO.	1 1/4 x 2 3/8 Headers for Extra Large Housing (Fig. 3 Above) CAT. NO.
681	Octal	685	690
682	Nine Pin	Not Available	715*
683	Eleven Pin	686	714
684	Twenty Pin	687	691*



### SELF-TAPPING SCREWS

CAT. NO. 689—For covers #4 x 7/16

\*on special order only



KEYSTONE

# SWAGE STANDOFFS AND SPACERS

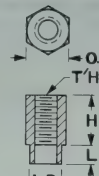
## SWAGE THREADED STANDOFFS

ROUND



BRASS NICKEL PLATE

HEX



BRASS ZINC PLATE

ROUND CAT. NO.	H Height Above Panel	L Shank Length	For Panel Thickness	LD Shank Diameter	HEX CAT. NO.
-------------------	-------------------------------	----------------------	---------------------------	-------------------------	-----------------

### 2-56 THREAD X .156 O.D. ( $\frac{5}{32}$ " )

1589-2	.125	.109	$\frac{1}{16}$	.125	1731-2
1589-3	.125	.140	$\frac{9}{32}$	.125	1731-3
1590-2	.187	.109	$\frac{1}{16}$	.125	1734-2
1590-3	.187	.140	$\frac{9}{32}$	.125	1734-3
1591-2	.250	.109	$\frac{1}{16}$	.125	1740-2
1591-3	.250	.140	$\frac{9}{32}$	.125	1740-3
1596-2	.375	.109	$\frac{1}{16}$	.125	1743-2
1596-3	.375	.140	$\frac{9}{32}$	.125	1743-3

### 4-40 THREAD X .250 O.D. ( $\frac{1}{4}$ " )

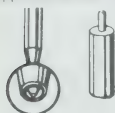
1560 A	.125	.109	$\frac{1}{16}$	.187	1653-2
1560 F	.125	.140	$\frac{9}{32}$	.187	1653-3
1790-2	.187	.109	$\frac{1}{16}$	.187	1746-2
1790-3	.187	.140	$\frac{9}{32}$	.187	1746-3
1650-2	.250	.109	$\frac{1}{16}$	.187	1627-2
1650-3	.250	.140	$\frac{9}{32}$	.187	1627-3
1651-2	.375	.109	$\frac{1}{16}$	.187	1628-2
1651-3	.375	.140	$\frac{9}{32}$	.187	1628-3
1623-2	.500	.109	$\frac{1}{16}$	.187	1629-2
1623-3	.500	.140	$\frac{9}{32}$	.187	1629-3
1624-2	.625	.109	$\frac{1}{16}$	.187	1654-2
1624-3	.625	.140	$\frac{9}{32}$	.187	1654-3
1625-2	.750	.109	$\frac{1}{16}$	.187	1655-2
1625-3	.750	.140	$\frac{9}{32}$	.187	1655-3
1792-2	.875	.109	$\frac{1}{16}$	.187	1749-2
1792-3	.875	.140	$\frac{9}{32}$	.187	1749-3
1652-2	1.000	.109	$\frac{1}{16}$	.187	1630-2
1652-3	1.000	.140	$\frac{9}{32}$	.187	1630-3

### 6-32 THREAD X .250 O.D. ( $\frac{1}{4}$ " )

1560 B	.125	.109	$\frac{1}{16}$	.187	1620-2
1560 C	.125	.140	$\frac{9}{32}$	.187	1620-3
1560 D	.125	.171	$\frac{1}{4}$	.187	1620-4
1612-2	.187	.109	$\frac{1}{16}$	.187	1752-2
1612-3	.187	.140	$\frac{9}{32}$	.187	1752-3
1612-4	.187	.171	$\frac{1}{4}$	.187	1752-4
1546	.250	.109	$\frac{1}{16}$	.187	1621-2
1546 B	.250	.140	$\frac{9}{32}$	.187	1621-3
1546 D	.250	.171	$\frac{1}{4}$	.187	1621-4
1561 B	.375	.109	$\frac{1}{16}$	.187	1622-2
1561 C	.375	.140	$\frac{9}{32}$	.187	1622-3
1561 D	.375	.171	$\frac{1}{4}$	.187	1622-4
1604-2	.500	.109	$\frac{1}{16}$	.187	1758-2
1604-3	.500	.140	$\frac{9}{32}$	.187	1758-3
1604-4	.500	.171	$\frac{1}{4}$	.187	1758-4
1605-2	.625	.109	$\frac{1}{16}$	.187	1759-2
1605-3	.625	.140	$\frac{9}{32}$	.187	1759-3
1605-4	.625	.171	$\frac{1}{4}$	.187	1759-4
1608-2	.750	.109	$\frac{1}{16}$	.187	1761-2
1608-3	.750	.140	$\frac{9}{32}$	.187	1761-3
1608-4	.750	.171	$\frac{1}{4}$	.187	1761-4
1796-2	.875	.109	$\frac{1}{16}$	.187	1775-2
1796-3	.875	.140	$\frac{9}{32}$	.187	1775-3
1796-4	.875	.171	$\frac{1}{4}$	.187	1775-4
1609-2	1.000	.109	$\frac{1}{16}$	.187	1784-2
1609-3	1.000	.140	$\frac{9}{32}$	.187	1784-3
1609-4	1.000	.171	$\frac{1}{4}$	.187	1784-4

## STAKING TOOLS FOR SWAGE STANDOFFS

Precision made tools—heat treated and plated. Will give your job the professional appearance. Set of tools consists of: Top Staking Tool and Anvil.



CAT. NO.	
TL-19	For Bushing 5/32 OD with 2-56 Thd.
TL-20	For Bushing 1/4 OD with 4-40 Thd.
TL-21	For Bushing 1/4 OD with 6-32 Thd.

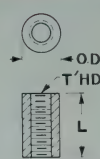
## THREADED SPACERS

Available in Brass or Aluminum

HEX



ROUND



HEX			ROUND	
ALUMINUM IRIDITE FINISH CAT. NO.	BRASS ZINC PLATE CAT. NO.	"L" LENGTH	ALUMINUM IRIDITE FINISH CAT. NO.	BRASS NICKEL PLATE CAT. NO.

### 2-56 THREAD X .156 O.D. ( $\frac{5}{32}$ " )

1797 A	1798 A	$\frac{3}{16}$ (.187)	1801 A	1802 A
1797 B	1798 B	$\frac{1}{4}$ (.250)	1801 B	1802 B
1797 C	1798 C	$\frac{5}{16}$ (.312)	1801 C	1802 C
1797 D	1798 D	$\frac{3}{8}$ (.375)	1801 D	1802 D

### 4-40 THREAD X .187 O.D. ( $\frac{3}{16}$ " )

1891	1450	$\frac{1}{4}$ (.250)	2025	1547
1892	1803	$\frac{3}{8}$ (.375)	2026	1864
1893	1656	$\frac{1}{2}$ (.500)	2027	1657
1894	1804	$\frac{5}{8}$ (.625)	2028	1865
1895	1656 A	$\frac{3}{4}$ (.750)	2029	1657 A
1896	1805	$\frac{7}{8}$ (.875)	2030	1866
1897	1656 B	1 (1.000)	2031	1657 B

### 4-40 THREAD X .250 O.D. ( $\frac{1}{4}$ " )

2201	1450 A	$\frac{1}{4}$ (.250)	3478	1547 A
2202	1450 B	$\frac{3}{8}$ (.375)	3479	1547 B
2203	1450 C	$\frac{1}{2}$ (.500)	3480	1547 C
1808	1829	$\frac{5}{8}$ (.625)	1839	1867
2204	1450 D	$\frac{3}{4}$ (.750)	3481	1547 D
1809	1830	$\frac{7}{8}$ (.875)	1846	1876
2205	1450 E	1 (1.000)	3482	1547 E
2206	1831	$1\frac{1}{2}$ (1.500)	3483	1877
2207	1832	2 (2.000)	3484	1878

### 6-32 THREAD X .250 O.D. ( $\frac{1}{4}$ " )

2208	1451 A	$\frac{1}{4}$ (.250)	3485	1548 A
2209	1451 B	$\frac{3}{8}$ (.375)	3486	1548 B
2210	1451 C	$\frac{1}{2}$ (.500)	3487	1548 C
1813	1451 D	$\frac{5}{8}$ (.625)	1847	1548 D
2211	1451 E	$\frac{3}{4}$ (.750)	3488	1548 E
1816	1833	$\frac{7}{8}$ (.875)	1848	1879
2212	1635	1 (1.000)	3489	1548 F
1818	1636	$1\frac{1}{4}$ (1.250)	1853	1881
2213	1637	$1\frac{1}{2}$ (1.500)	3490	1882
1819	1638	$1\frac{3}{4}$ (1.750)	1855	1883
2214	1639	2 (2.000)	3491	1884
1820	1642	$2\frac{1}{4}$ (2.250)	1856	1885
1825	1643	$2\frac{1}{2}$ (2.500)	1857	1886

### 8-32 THREAD X .250 O.D. ( $\frac{1}{4}$ " )

2215	1474 A	$\frac{1}{4}$ (.250)	3492	1692 A
2216	1474 B	$\frac{3}{8}$ (.375)	3493	1692 B
2217	1474 C	$\frac{1}{2}$ (.500)	3494	1692 C
1827	1834	$\frac{5}{8}$ (.625)	1858	1887
2218	1474 D	$\frac{3}{4}$ (.750)	3495	1692 D
1828	1836	$\frac{7}{8}$ (.875)	1859	1888
2219	1474 E	1 (1.000)	3496	1692 E
2220	1837	$1\frac{1}{2}$ (1.500)	3497	1889
2221	1838	2 (2.000)	3498	1899

### 8-32 THREAD X .375 O.D. ( $\frac{3}{8}$ " )

1926 A	1452 A	$\frac{3}{8}$ (.375)	2315 A	1549 A
1926 B	1452 B	$\frac{1}{2}$ (.500)	2315 B	1549 B
1926 C	1452 C	$\frac{5}{8}$ (.625)	2315 C	1549 C
1926 D	1452 D	$\frac{3}{4}$ (.750)	2315 D	1549 D
1926 E	1452 E	1 (1.000)	2315 E	1549 E

NOTE: SPACERS OVER 1.00 LONG ARE TAPPED .375 DEEP EACH END.

## SPECIFICATIONS:

BRASS: QQ-B-626, ALLOY 360,  $\frac{1}{2}$  HARD

ALUMINUM: QQ-A-225/3, ALLOY 2011-T3

NICKEL PLATED: QQ-N-290, TYPE VI1

IRIDITE FINISH: MIL-C-5541

ZINC: QQ-2-325B, TYPE I CLASS 3

CADMIUM PLATE: QQ-P-416, TYPE 2, CLASS B



# STANDOFFS AND SPACERS

KEYSTONE

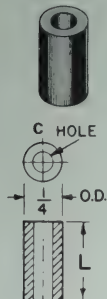


## BRASS OR ALUMINUM ROUND CLEAR SPACERS

- CHOICE OF: • BRASS-NICKEL PLATE (QQ-N-290, TYPE VII)  
• ALUMINUM-IRIDITE FINISH (MIL-C-5541)

CLEARANCE HOLE:

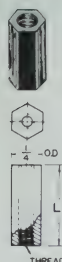
- 120 FOR #4 SCREW
- 140 FOR #6 SCREW
- 171 FOR #8 SCREW



L LENGTH	C HOLE	BRASS		ALUMINUM
		CAT. NO.		CAT. NO.
125	.120	1909		2036
250	.120	1454 A		3457
375	.120	1454 B		3458
500	.120	1454 C		3459
625	.120	1919		2314
.750	.120	1454 D		3460
875	.120	1920		3402
1.000	.120	1454 E		3461
1.500	.120	1924		3462
2.000	.120	1925		3463
125	.140	1934		3403
250	.140	1457 A		3464
375	.140	1457 B		3465
500	.140	1457 C		3466
625	.140	1935		3429
.750	.140	1457 D		3467
875	.140	1936		3438
1.000	.140	1457 E		3468
1.500	.140	1937		3469
2.000	.140	1938		3470
125	.171	1942		4258
250	.171	1480		3471
375	.171	1481		3472
500	.171	1482		3473
625	.171	2032		4259
.750	.171	1483		3474
875	.171	2033		4260
1.000	.171	1484		3475
1.500	.171	2034		3476
2.000	.171	2035		3477

## HEX STAINLESS STEEL SPACERS

- MATERIAL: PER QQ-S-764, CLASS 303  
• CORROSION RESISTANT



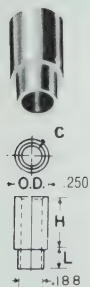
L Length Inches	4-40 Thread Cat. No.	6-32 Thread Cat. No.	8-32 Thread Cat. No.
1/8 (.250)	1921	1922	1923
3/8 (.375)	1921A	1922A	1923A
1/2 (.500)	1921B	1922B	1923B
3/4 (.750)	1921C	1922C	1923C
1 (1.000)	1921D	1922D	1923D
1 1/8 (1.500)	1921E	1922E	1923E
2 (2.000)	1921F	1922F	1923F

- 4-40 THREAD ON 1/2" AND OVER TAPPED 1/4" EACH END
- 6-32 & 8-32 THREAD ON 1" AND OVER TAPPED 3/8" EACH END

## ROUND SWAGE TYPE CLEAR SPACERS

BRASS - NICKEL PLATE

- CLEARANCE HOLE: • 120 FOR #4 SCREW  
• 140 FOR #6 SCREW



CAT. NO.	H HEIGHT	FOR PANEL THICKNESS	C HOLE	L
5060-2	250	1.16	120	109
5060-3	250	3.32	120	141
5061-2	375	1.16	120	109
5061-3	375	3.32	120	141
5062-2	500	1.16	120	109
5062-3	500	3.32	120	141
5063-2	250	1.16	140	109
5063-3	250	3.32	140	141
5064-2	375	1.16	140	109
5064-3	375	3.32	140	141
5065-2	500	1.16	140	109
5065-3	500	3.32	140	141

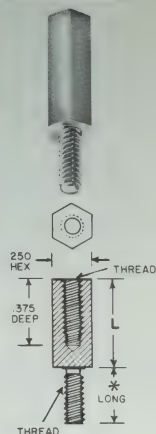
## BRASS HEX MALE/FEMALE THREADED SPACERS

BRASS-NICKEL PLATED

LENGTH INCHES L	4-40 THREAD CAT. NO.	6-32 THREAD CAT. NO.	8-32 THREAD CAT. NO.
3/8 (.375)**	7200	7210	7220
1/2 (.500)	1944	1952	1957
5/8 (.625)	1945	1953	1958
3/4 (.750)	1946	1954	1959
7/8 (.875)	7201	7211	7221
1 (1.000)	1947	1644	1960
1 1/8 (1.125)	7202	7212	7222
1 1/4 (1.250)	1948	1955	1961
1 3/8 (1.375)	1949	1956	1962
1 1/2 (1.500)	1950	1645	1963
1 5/8 (1.625)	7203	7214	7224
1 3/4 (1.750)	7205	7215	7225
2 (2.000)	1951	1646	1964

- \* 3/8" External Thread on 8-32 Spacers
- 1/4" External Thread on 6-32 Spacers
- 3/16" External Thread on 4-40 Spacers

\*\* Internal Thread .250 Deep



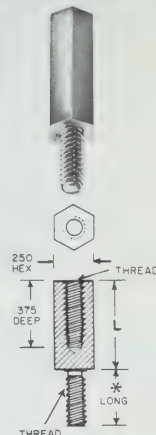
## ALUMINUM HEX MALE/FEMALE THREADED SPACERS

ALUMINUM-IRIDITE FINISH

LENGTH INCHES "L"	4-40 THREAD CAT. NO.	6-32 THREAD CAT. NO.	8-32 THREAD CAT. NO.
3/8 (.375)**	8400	8413	8426
1/2 (.500)	8401	8414	8427
5/8 (.625)	8402	8415	8428
3/4 (.750)	8403	8416	8429
7/8 (.875)	8404	8417	8430
1 (1.000)	8405	8418	8431
1 1/8 (1.125)	8406	8419	8432
1 1/4 (1.250)	8407	8420	8433
1 3/8 (1.375)	8408	8421	8434
1 1/2 (1.500)	8409	8422	8435
1 5/8 (1.625)	8410	8423	8436
1 3/4 (1.750)	8411	8424	8437
2 (2.000)	8412	8425	8438

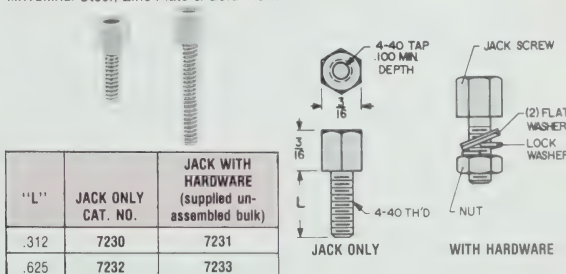
- \* 3/8" External Thread on 8-32 Spacers
- 1/4" External Thread on 6-32 Spacers
- 3/16" External Thread on 4-40 Spacers

\*\* Internal Thread .250 Deep



## JACK SCREWS

"D" Subminiature Connector Mounting Screw. Per Mil Spec MIL-C-24308/26. Equivalent to AMP, CANNON & TRW Jack Screws. Other sizes upon request.  
MATERIAL: Steel, Zinc Plate & Gold Iridite.



"L"	JACK ONLY CAT. NO.	JACK WITH HARDWARE (supplied un- assembled bulk)
.312	7230	7231
.625	7232	7233



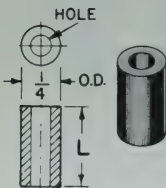
## NYLON SPACERS

Economical for terminal or printed circuit board supports.

### ROUND THRU-HOLE SPACERS

MATERIAL: Nylon 6/6

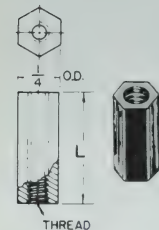
"L" Length Inches	For #4 Screw .120 Hole Cat. No.	For #6 Screw .140 Hole Cat. No.	For #8 Screw .171 Hole Cat. No.
1/8 (.125)	875	883	891
1/4 (.250)	876	884	892
3/8 (.375)	877	885	893
1/2 (.500)	878	886	894
5/8 (.625)	879	887	895
3/4 (.750)	880	888	896
7/8 (.875)	881	889	897
1 (1.000)	882	890	898



### HEX THREADED SPACERS

MATERIAL: Nylon 6/6

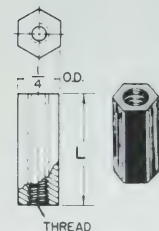
"L" LENGTH INCHES	4-40 THREAD CAT. NO.	5-32 THREAD CAT. NO.	8-32 THREAD CAT. NO.
1/4 (.250)	1902A	1903A	1904A
3/8 (.375)	1902B	1903B	1904B
1/2 (.500)	1902C	1903C	1904C
5/8 (.625)	1902F	1903F	1904F
3/4 (.750)	1902D	1903D	1904D
7/8 (.875)	1902G	1903G	1904G
1 (1.000)	1902E	1903E	1904E



### FLAME RETARDANT HEX THREADED SPACERS

MATERIAL: Monsanto 340 FR UL 94V-0 rating

"L" LENGTH INCHES	4-40 THREAD CAT. NO.	6-32 THREAD CAT. NO.	8-32 THREAD CAT. NO.
1/4 (.250)	8440A	8441A	8442A
3/8 (.375)	8440B	8441B	8442B
1/2 (.500)	8440C	8441C	8442C
5/8 (.625)	8440D	8441D	8442D
3/4 (.750)	8440E	8441E	8442E
7/8 (.875)	8440F	8441F	8442F
1 (1.000)	8440G	8441G	8442G

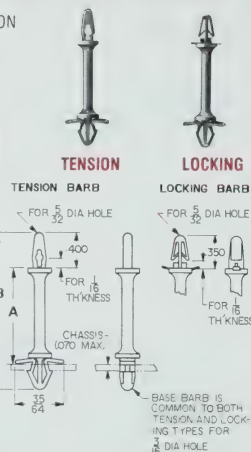


## NYLON SPACER SUPPORTS

TWO STYLES AVAILABLE: LOCKING & TENSION

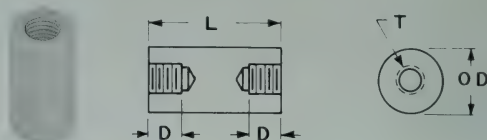
- EASY TO INSTALL • LOW COST
- SECURE & STABLE • RELEASABLE
- FLAME RETARDANT NYLON PER 94V-0

CAT. NO.	A	TYPE	B
1927 A	1/4	Tension	.937
1927 B		Locking	.890
1928 A	3/8	Tension	1.062
1928 B		Locking	1.015
1929 A	1/2	Tension	1.187
1929 B		Locking	1.140
1930 A	5/8	Tension	1.312
1930 B		Locking	1.265
1931 A	3/4	Tension	1.437
1931 B		Locking	1.390
1932 A	7/8	Tension	1.562
1932 B		Locking	1.515
1933 A	1	Tension	1.687
1933 B		Locking	1.640



## CERAMIC STANDOFFS

Ideal insulator for high temperature conditions. Ceramic standoff meets Mil-Spec MIL-1-10; made of grade L5 ceramic, glazed.



CAT. NO.	Length	O.D.	T Thread	D(2) Depth	NL #
7661	.500	.375	6-32	.156	NL523W01-004
7662	.625	.375	6-32	.250	NL523W01-005
7663	.625	.500	8-32	.187	NL523W02-005
7664	.750	.375	6-32	.250	NL523W01-006
7665	.750	.500	8-32	.250	NL523W02-006
7666	1.000	.375	6-32	.375	NL523W01-008
7667	1.000	.500	8-32	.375	NL523W02-008
7668	1.000	.750	10-32	.375	NL523W03-008
7669	1.250	.375	6-32	.375	NL523W01-010
7670	1.250	.500	8-32	.375	NL523W02-010
7671	1.250	1.000	1/4-20	.437	NL523W04-010
7672	1.500	.375	6-32	.375	NL523W01-012
7673	1.500	.500	8-32	.375	NL523W02-012
7674	1.500	.750	10-32	.375	NL523W03-012
7675	1.500	1.000	1/4-20	.500	NL523W04-012
7676	2.000	.375	6-32	.375	NL523W01-016
7677	2.000	.500	8-32	.375	NL523W02-016
7678	2.000	.750	10-32	.375	NL523W03-016

## PHENOLIC SPACERS

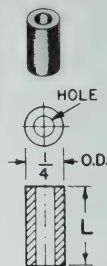
MATERIAL:

PBE Grade Natural Color Phenolic  
Special Sizes Made to Order - Promptly Quoted

- RESISTS ABRASIONS & CHEMICALS • EXCELLENT DIELECTRIC
- LOW MOISTURE ABSORPTION • GOOD MECHANICAL STRENGTH

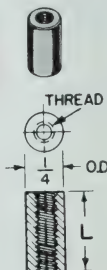
### SPACERS - DRILLED HOLE ONLY

"L" Length Inches	For #4 Screw .120 Hole CAT. NO.	For #6 Screw .140 Hole CAT. NO.	For #8 Screw .171 Hole CAT. NO.
1/4 (.250)	360	367	1490
3/8 (.375)	361	368	1491
1/2 (.500)	362	369	1492
3/4 (.750)	363	370	1493
1 (1.000)	364	371	1494
1 1/2 (1.500)	365	372	374
2 (2.000)	366	373	375



### SPACERS - WITH TAPPED HOLE

"L" Length Inches	4-40 Thread CAT. NO.	6-32 Thread CAT. NO.	8-32 Thread CAT. NO.
1/4 (.250)	376	383	390
3/8 (.375)	377	384	391
1/2 (.500)	378	385	392
3/4 (.750)	379	386	393
1 (1.000)	380	387	394
1 1/2 (1.500)	381	388	395
2 (2.000)	382	389	396



1.500 and 2" are tapped 3/8 deep each end



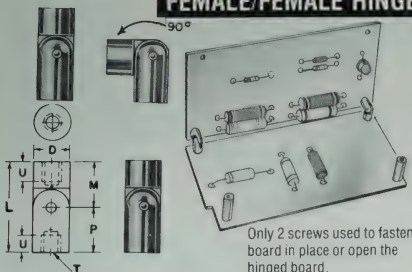
## HINGED STANDOFFS FOR TERMINAL BOARDS

APPLICATIONS UNLIMITED • TIME SAVING • CUT COST  
OF SERVICING • SPACE SAVER • INTERCONNECT  
CIRCUITS OR SERVICES WITHOUT DANGER OF  
SHORTING • WIRING EXPOSED FOR EASY TEST

**MATERIAL:** BRASS per MIL SPEC. QQ-B-626A COMP. 22-1/2 HARD.

**FINISH:** Zinc Plate and Gold Iridite

### FEMALE/FEMALE HINGE



Only 2 screws used to fasten board in place or open the hinged board.

These standoffs mount at front of the board.



**STANDOFF ONLY**  
For Front of Board

CAT. NO.	T THREAD	D DIAM.	L LENGTH	U	M	P
351	4-40	.187	.750	.172	.375	.375
352	4-40	.187	1.000	.250	.375	.625
330	4-40	.187	1.250	.250	.625	.625
353	6-32	.250	.750	.172	.375	.375
354	6-32	.250	1.000	.250	.375	.625
331	6-32	.250	1.250	.250	.625	.625
355	8-32	.250	.750	.172	.375	.375
356	8-32	.250	1.000	.250	.375	.625
332	8-32	.250	1.250	.250	.625	.625

### MALE/FEMALE HINGE



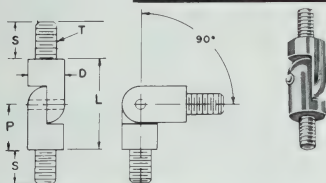
These standoffs mount at front of the board.



**STANDOFF ONLY**  
For Front of Board

CAT. NO.	T THREAD	L LENGTH	D DIAM.	S	U	P	M
333	4-40	.625	.187	.250	.172	.250	.375
334	4-40	.875	.187	.250	.250	.250	.625
335	6-32	.625	.250	.312	.172	.250	.375
336	6-32	.875	.250	.312	.250	.250	.625
337	8-32	.625	.250	.312	.172	.250	.375
338	8-32	.875	.250	.312	.250	.250	.625

### MALE/MALE HINGE



These standoffs mount at front of the board.



**STANDOFF ONLY**  
For Front of Board

CAT. NO.	T THREAD	L LENGTH	D DIAM.	S	P
357	4-40	1/2	.187	1/4	.250
358	6-32	1/2	.250	5/16	.250
359	8-32	1/2	.250	5/16	.250

CAT. NO.	LENGTH
1657	.500
1548C	.500
1692C	.500

## SPACER ORGANIZER

Avail yourself of all practical sizes & types of spacers and standoffs. Maintain a neat complete inventory of the most frequently used parts in day-to-day operations. Choice of "8" different kits of the most popular spacers and standoffs. An assortment of various sizes and styles in Brass, Aluminum and Nylon with tapped or thru-hole. Metal cabinet designed to be stacked on one another or wall mounted. Clear plastic drawers labeled for easy identification.



THE FOLLOWING ORGANIZER KITS ARE AVAILABLE FROM STOCK!

### 1/4" ROUND THREADED



Brass Nickel Plated  
Assortment of 1500 pcs. in 1/4", 3/8", 1/2", 3/4", and 1" lengths. With thread sizes of 4-40, 6-32 and 8-32. 100 pcs. of each size complete with cabinet.

**KIT NO. STR-15**



Aluminum Iridite Finish  
Assortment of 1500 pcs. in 1/4", 3/8", 1/2", 3/4", and 1" lengths. With thread sizes of 4-40, 6-32 and 8-32. 100 pcs. of each size complete with cabinet.

**KIT NO. STR-35**

### 1/4" HEX THREADED



Brass Zinc Plated  
Assortment of 1500 pcs. in 1/4", 3/8", 1/2", 3/4", and 1" lengths. With thread sizes of 4-40, 6-32 and 8-32. 100 pcs. of each size complete with cabinet.

**KIT NO. STH-14**



Aluminum Iridite Finish  
Assortment of 1500 pcs. in 1/4", 3/8", 1/2", 3/4", and 1" lengths. With thread sizes of 4-40, 6-32 and 8-32. 100 pcs. of each size complete with cabinet.

**KIT NO. STH-22**

### 1/4" ROUND CLEAR



Brass Nickel Plated  
Assortment of 1500 pcs. in 1/4", 3/8", 1/2", 3/4", and 1" lengths. With clearance holes for #4, #6 and #8. 100 pcs. of each size complete with cabinet.

**KIT NO. SPR-13**



Aluminum Iridite Finish  
Assortment of 1500 pcs. in 1/4", 3/8", 1/2", 3/4", and 1" lengths. With clearance holes for #4, #6 and #8. 100 pcs. of each size complete with cabinet.

**KIT NO. SPR-34**

### 1/4" ROUND CLEAR



Nylon 6/6  
Assortment of 1500 pcs. in 1/2", 3/4", 1", 1 1/2", and 1 3/4" lengths. With thread sizes of 4-40, 6-32 and 8-32. 50 pcs. of each size complete with cabinet.

**KIT NO. SPR-8**



Brass Nickel Plated  
Assortment of 750 pcs. in 1/2", 3/4", 1", 1 1/2", and 1 3/4" lengths. With thread sizes of 4-40, 6-32 and 8-32. 50 pcs. of each size complete with cabinet.

**KIT NO. STH-19**

## SPECIAL REQUIREMENTS?

Use our Engineering and Production Facilities to design and develop new products or modify existing components to meet your specific needs.





# HANDLES

KEYSTONE



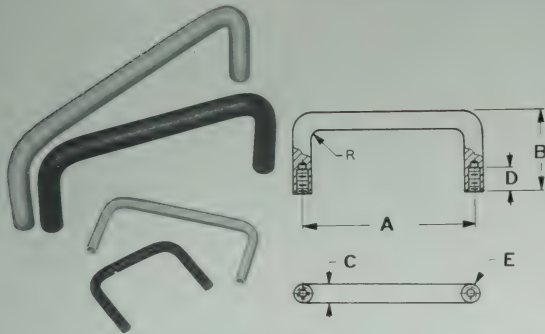
**MATERIAL:** BRASS-QQ-B-626, ALLOY 360, 1/2 HARD  
ALUMINUM—QQ-A-325, ALLOY 6061-T6

**PLATING:** BRASS HANDLES—NICKEL PLATE per QQ-N-290, TYPE VI  
ALUMINUM HANDLES—BLACK ANODIZE per MIL-A-8625a

**NOTE:** OTHER SIZES, MATERIALS AND PLATING AVAILABLE. QUOTATIONS UPON REQUEST.

## ROUND HANDLES

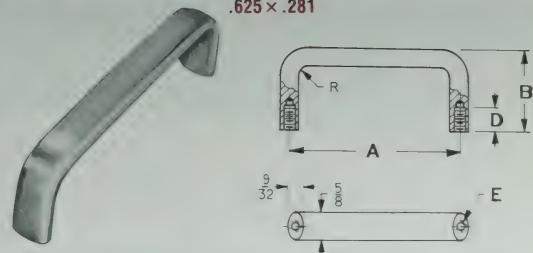
.156, .250, .312, .375 DIAMETER



BRASS CAT. NO.	ALUMINUM CAT. NO.	A	B	DIA. C	D	E	R
7140	7170	1 250	1 000	.156	.375	4-40	.156
7141	7171	2 000	1 000	.156	.375	4-40	.156
7142	7172	3 000	1 000	.156	.375	4-40	.156
7143	7173	3 000	1 500	.250	.562	8-32	.250
7144	7174	4 000	1 500	.250	.562	8-32	.250
7145	7175	3 000	1 500	.312	.500	10-32	.312
7146	7176	4 000	1 500	.312	.625	10-32	.312
7147	7177	4 562	1 500	.312	.625	10-32	.312
7148	7178	6 000	1 500	.312	.625	10-32	.312
7149	7179	6 437	1 750	.312	.625	10-32	.312
7150	7180	4 000	1 375	.375	.375	10-32	.375
7151	7181	6 000	1 375	.375	.375	10-32	.375

## OVAL HANDLES

.625 x .281



BRASS CAT. NO.	ALUMINUM CAT. NO.	A	B	D	E	R
7156	7186	4 000	1 750	.500	10-32	.500
7157	7187	6 000	1 375	.375	10-32	.500
7158	7188	6 437	1 750	.500	10-32	.500

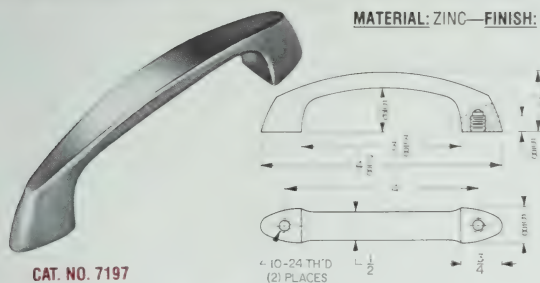
## FERRULES FOR ROUND HANDLES



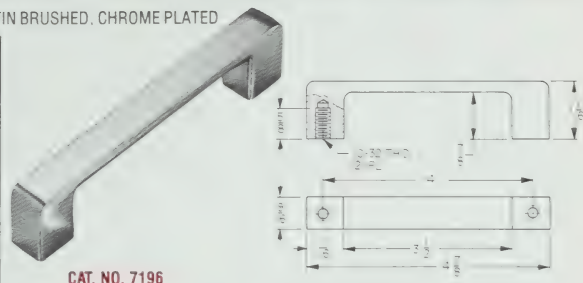
BRASS CAT. NO.	ALUMINUM CAT. NO.	FOR DIA.	A	B	C	D	E	F
7162	7192	.156	.250	.116	.047	.125	.200	.161
7163	7193	.250	.375	.204	.062	.187	.320	.260
7164	7194	.312	.562	.218	.062	.250	.406	.320

## CONTEMPORARY HANDLES

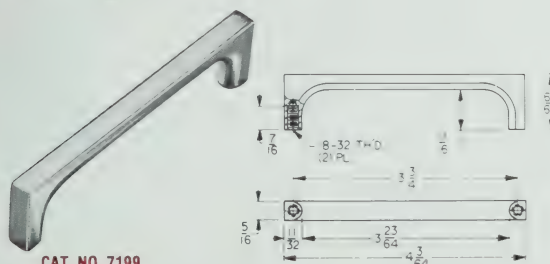
**MATERIAL:** ZINC—**FINISH:** SATIN BRUSHED, CHROME PLATED



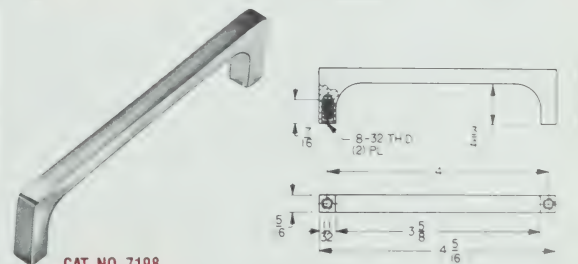
CAT. NO. 7197



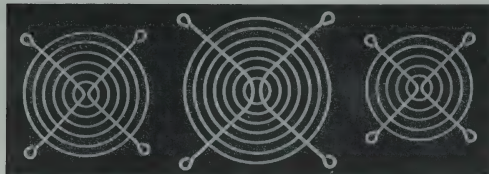
CAT. NO. 7196



CAT. NO. 7199



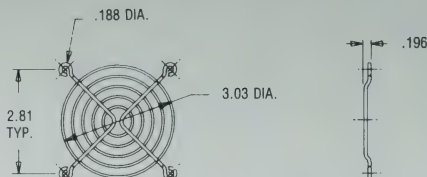
CAT. NO. 7198



These guards are used to cover and protect fan blades and vent openings in equipment from accidental damage, while providing maximum air flow for ventilation. Made from top quality low carbon steel wire (C-1010) which combines strength with superior forming. Clean, strong butt welds with minimum flash. Consistent guard diameter provides maximum opening for air flow and strength. Suitable for use with standard fans manufactured by Rotron, Howard, ETRI, PAPST, IMC and other leading manufacturers.

**Accurate ring spacing meets 1/4" probe test standards.**

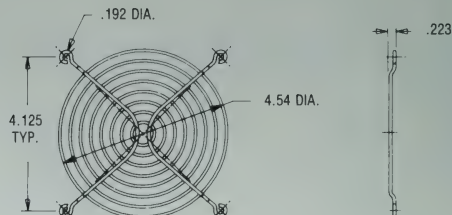
**PLATING:** High-Lustre Zinc Finish.



Meets 1/4" Probe  
Test Standards

**CONSTRUCTION:**  
Rings - .062 Wire Dia.  
Ribs - .080 Wire Dia.

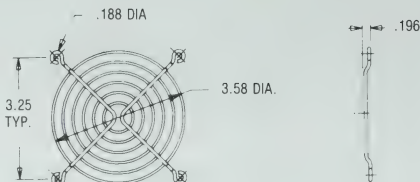
**CAT. NO. 8450**



Meets 1/4" Probe  
Test Standards

**CONSTRUCTION:**  
Rings - .072 Wire Dia.  
Ribs - .091 Wire Dia.

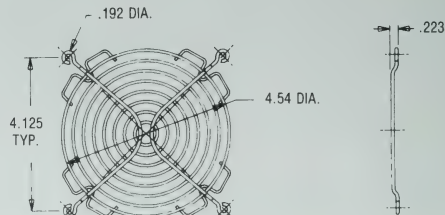
**CAT. NO. 8453**



Meets 1/4" Probe  
Test Standards

**CONSTRUCTION:**  
Rings - .062 Wire Dia.  
Ribs - .080 Wire Dia.

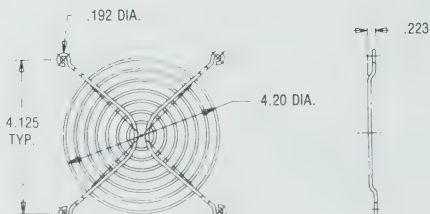
**CAT. NO. 8451**



Meets 1/4" Probe  
Test Standards

**CONSTRUCTION:**  
Rings - .072 Wire Dia.  
Ribs - .091 Wire Dia.

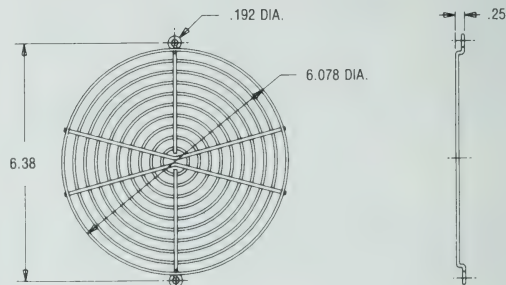
**CAT. NO. 8454**



Meets 1/4" Probe  
Test Standards

**CONSTRUCTION:**  
Rings - .072 Wire Dia.  
Ribs - .091 Wire Dia.

**CAT. NO. 8452**



Meets 1/4" Probe  
Test Standards

**CONSTRUCTION:**  
Rings - .072 Wire Dia.  
Ribs - .091 Wire Dia.

**CAT. NO. 8455**



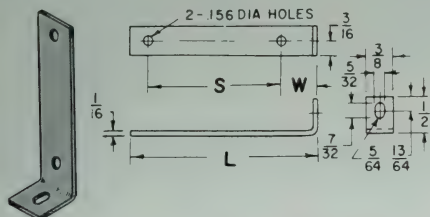
## TURRET TERMINAL BOARD BRACKETS

Originally designed for our line of standardized terminal boards, these brackets will find many uses for a variety of applications. Available in both steel with cad. plate finish or aluminum.

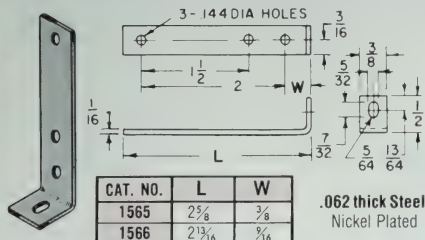
### Choice of steel or aluminum

**.062 thick Steel:** Per Mil Spec. QQ-S 633 B Grade FS-1010 nickel plated per QQ-P-416 A Type II, Class B.

**.062 thick Aluminum:** Per QQ-A-250/8b



CAT. NO	Steel	Alum.	W	L	S	FOR BOARDS	CAT. NOS.
1556	622	3/8	1 1/4	1	15032	15072	15092
1567	623	3/8	2 1/4	1 1/2	15033	15073	15093
1568	624	3/8	2 3/4	2	15034	15074	15094
1569	625	3/8	3 1/4	2 1/2	15035	15075	15095
1570	626	9/32	1 3/16	3/4	15022	15024	15030
1571	627	9/32	1 1/8	1 1/16	15036	15076	15096

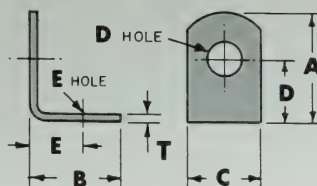


CAT. NO.	L	W
1565	2 5/8	3/8
1566	2 13/16	9/16

**.062 thick Steel**  
Nickel Plated

## UNIVERSAL BRACKETS

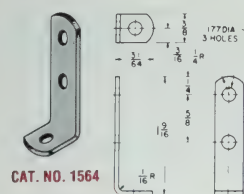
A wide range of brackets for many uses and for your particular applications. Available from stock—Made of approved materials and platings.



STANDARD BRACKETS  
(Brass and Steel)

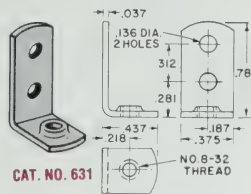
### Selection of Brackets With Tapped and/or Clear Holes.

CAT. NO.	A	B	C	D	D HOLE DIA.	E	E HOLE DIA.	T	MATERIAL	FINISH
610	.171	.171	.125	.109	.067	.109	.067		.018 BRASS	TIN
611	.375	.422	.312	.234	.135	.250	8-32 TAP.	.037	BRASS	TIN
612	.343	.375	.250	.203	.128	.250	4-40 TAP.	.062	STEEL	ZINC
621	.343	.375	.250	.203	4-40 TAP.	.250	4-40 TAP.	.062	STEEL	ZINC
633	.375	.375	.281	.218	.140	.218	.140	.032	BRASS	NICKEL
634	.375	.375	.281	.218	.140	.218	6-32 TAP.	.032	BRASS	NICKEL
613	.390	.453	.375	.234	.147	.299	.128	.032	BRASS	NICKEL
614	.406	.343	.312	.250	.144	.187	6-32 TAP.	.032	BRASS	TIN
615	.437	.343	.281	.281	.144	.203	.125	.032	BRASS	TIN
616	.453	.312	.250	.265	.136	.187	4-40 TAP.	.046	BRASS	TIN
617	.578	.500	.500	.328	.165	.299	6-32 TAP.	.062	STEEL	TIN
618	.628	.628	.375	.378	.169	.378	.169	.050	BRASS	NICKEL
619	.687	.687	.375	.500	.144	.500	.144	.032	STEEL	TIN
620	1.156	.656	.375	.906	.169	.406	.169	.032	STEEL	TIN



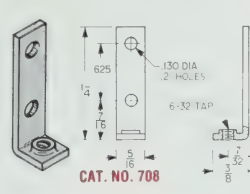
CAT. NO. 1564

.062 Steel-Nickel Plated



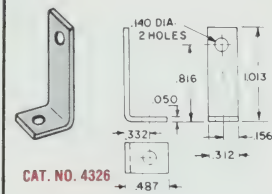
CAT. NO. 631

.037 Steel-Tin Plated



CAT. NO. 708

.062 Steel-Nickel Plated

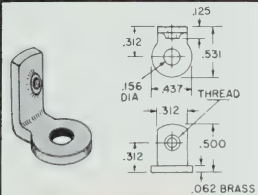


CAT. NO. 4326

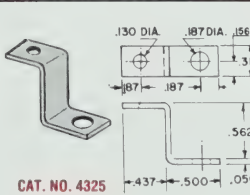
.050 Steel Nickel Plated

## CUSTOM METAL STAMPINGS

Complete facilities available for both short and long run metal stampings and sub-assemblies. Quotations on Special Stampings furnished promptly upon receipt of sample, sketch or blueprints.

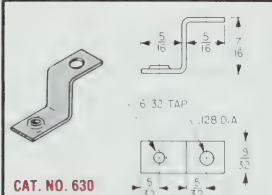


CAT. NO. 4332 (Tapped 6-32)  
CAT. NO. 4333 (Tapped 8-32)  
Nickel Plated



CAT. NO. 4325

.050 Steel Nickel Plated



CAT. NO. 630

.031 Brass, Tin Plated

Military Knobs per MS 91528 are QPL listed.

## MATERIAL SPECIFICATIONS:

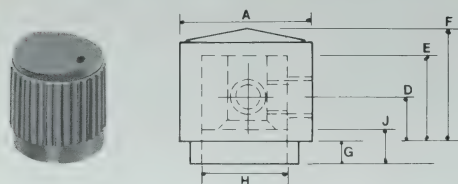
**KNOB:** Molded of polycarbonate self extinguishing thermoplastic. Matte Finish. (Method 111 of MIL-Std 202)

**METAL INSERT:** Aluminum, plated to withstand salt spray. (Method 101, test condition B, of MIL-Std 202)

**SET SCREWS:** Two socket head set-screws, type 111, style 4, of specification FF-S-103 per knob.

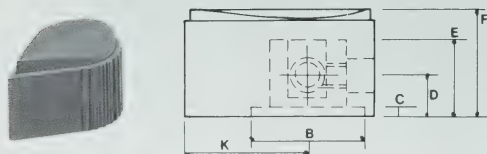
## SKIRTED ROUND

FIG. 2



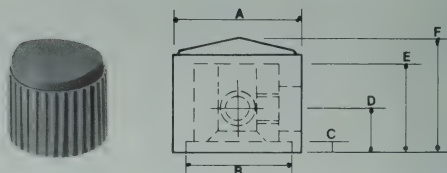
## POINTER

FIG. 4



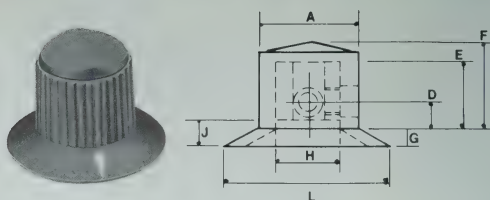
## ROUND

FIG. 1



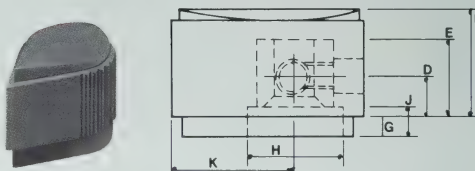
## DIAL

FIG. 3



## SKIRTED POINTER

FIG. 5



CAT. NO.		FIG. NO.	KNOB DIA.	SHAFT DIA.	(2) SET SCREWS	A - .030 + .010	B MIN.	C MIN.	D MAX.	E MIN.	F ± .030	G REF.	H MIN.	J MIN.	K ± .005	L MAX.
8500	8520	1	.500	.125	4-40	.505	.435	.026	.158	.405	.510	—	—	—	—	—
8501	8521	1	.700	.250	8-32	.700	.485	.026	.187	.405	.610	—	—	—	—	—
8502	8522	1	.900	.250	8-32	.905	.640	.114	.260	.520	.790	—	—	—	—	—
8503	8523	1	1.250	.250	8-32	1.250	.750	.114	.260	.455	.700	—	—	—	—	—
8504	8524	2	.500	.125	4-40	.505	—	—	.158	.405	.510	.150	.300	.177	—	—
8505	8525	2	.700	.250	8-32	.700	—	—	.187	.405	.610	.170	.485	.188	—	—
8506	8526	2	.900	.250	8-32	.905	—	—	.260	.520	.790	.218	.640	.320	—	—
8507	8527	2	1.250	.250	8-32	1.250	—	—	.260	.455	.700	.150	.750	.250	—	—
8508	—	3	.500	.125	4-40	.505	—	—	.158	.405	.510	.150	.300	.177	—	.900
8509	—	3	.700	.250	8-32	.700	—	—	.187	.405	.610	.170	.485	.188	—	1.150
8510	—	3	.900	.250	8-32	.905	—	—	.260	.520	.790	.218	.640	.320	—	1.525
8511	—	3	1.250	.250	8-32	1.250	—	—	.260	.455	.700	.150	.750	.250	—	1.837
—	8532	4	.500	.125	4-40	—	.435	.026	.158	.405	.510	—	—	—	.490	—
—	8533	4	.700	.250	8-32	—	.485	.026	.187	.405	.610	—	—	—	.680	—
—	8534	4	.900	.250	8-32	—	.640	.114	.260	.520	.790	—	—	—	.885	—
—	8535	5	.500	.125	4-40	—	—	—	.158	.405	.510	.150	.300	.177	.490	—
—	8536	5	.700	.250	8-32	—	—	—	.187	.405	.610	.170	.485	.188	.680	—
—	8537	5	.900	.250	8-32	—	—	—	.260	.520	.790	.218	.640	.320	.885	—



# INSTRUMENTATION KNOBS

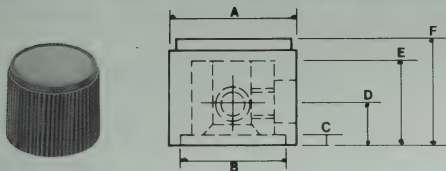
KEYSTONE



Knobs are molded of black A.B.S. thermoplastic with a mirror finish. This is a general purpose grade for excellence in appearance and offers high impact strength. Knobs have a spun aluminum inlay with a clear coated finish. Aluminum bushings accept 1/8" or 1/4" diameter shafts. Supplied with two (2) set screws 90° apart.

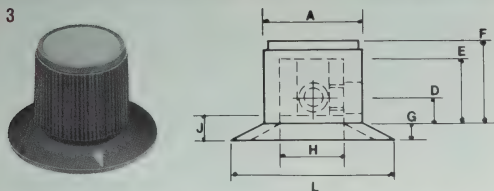
## ROUND

FIG. 1



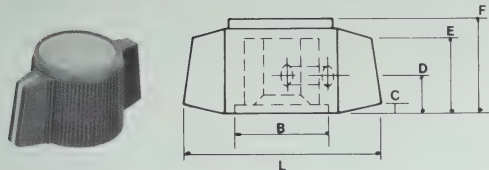
## ROUND WITH DIAL

FIG. 3



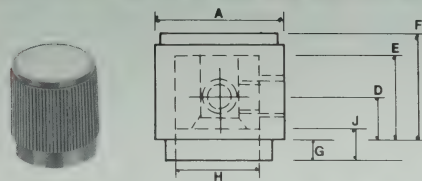
## DOUBLE BAR

FIG. 5



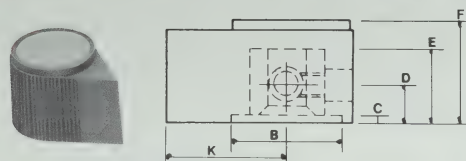
## SKIRTED ROUND

FIG. 2



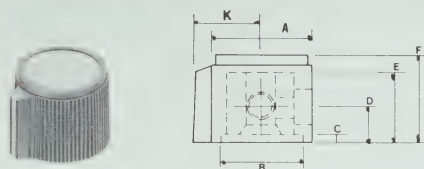
## POINTER

FIG. 4



## SINGLE BAR

FIG. 6



CAT. NO.		FIG. NO.	KNOB DIA.	SHAFT DIA.	(2) SET SCREWS	A + .025 - .005	ROUND TYPE NUT CLEARANCE		D MAX.	HOLE DEPTH		F ± .030	G ± .030	SKIRTED & DIAL NUT CLEARANCE		K + .025 - .005	L MAX.
WITH INDICATOR	PLAIN						B MIN.	C MIN.		E MIN.	H MIN.			J MIN.			
8550	8580	1	.500	.125	4-40	.505	.435	.026	.158	.405	.510	—	—	—	—	—	—
8551	8581	1	.700	.250	8-32	.700	.485	.026	.187	.405	.610	—	—	—	—	—	—
8552	8582	1	.900	.250	8-32	.905	.640	.114	.260	.520	.790	—	—	—	—	—	—
8553	8583	1	1.250	.250	8-32	1.250	.750	.114	.260	.455	.700	—	—	—	—	—	—
8554	8584	2	.500	.125	4-40	.505	—	—	.158	.405	.510	.150	.360	.177	—	—	—
8555	8585	2	.700	.250	8-32	.700	—	—	.187	.405	.610	.170	.485	.188	—	—	—
8556	8586	2	.900	.250	8-32	.905	—	—	.260	.520	.790	.220	.640	.320	—	—	—
8557	8587	2	1.250	.250	8-32	1.250	—	—	.250	.455	.700	.150	.750	.250	—	—	—
8558	8588	3	.500	.125	4-40	.505	—	—	.158	.405	.510	.150	.360	.177	—	.900	—
8559	8589	3	.700	.250	8-32	.700	—	—	.187	.405	.610	.170	.485	.188	—	1.150	—
8560	8590	3	.900	.250	8-32	.905	—	—	.260	.520	.790	.220	.640	.320	—	1.525	—
8561	8591	3	1.250	.250	8-32	1.250	—	—	.250	.455	.700	.150	.750	.250	—	1.837	—
—	8592	4	.500	.125	4-40	—	.435	.026	.158	.405	.510	—	—	—	.490	—	—
—	8593	4	.700	.250	8-32	—	.485	.026	.187	.405	.610	—	—	—	.680	—	—
—	8594	4	.900	.250	8-32	—	.640	.114	.260	.520	.790	—	—	—	.885	—	—
8565	—	5	.700	.250	8-32	—	.485	.026	.187	.405	.610	—	—	—	—	1.150	—
8566	—	5	.900	.250	8-32	—	.640	.114	.260	.520	.790	—	—	—	—	1.525	—
8567	—	6	.500	.125	4-40	.505	.435	.026	.158	.405	.510	—	—	—	.350	—	—
8568	—	6	.700	.250	8-32	.700	.485	.026	.187	.405	.610	—	—	—	.460	—	—
8569	—	6	.900	.250	8-32	.905	.640	.114	.260	.520	.790	—	—	—	.590	—	—



KEYSTONE

# PHENOLIC INSTRUMENT CASES – TEST PROBE

## PHENOLIC INSTRUMENT CASES

- CHOICE OF 5 POPULAR SIZES
- STURDY CONSTRUCTION
- FLUSH MOUNTING PANELS

**CASES:** Precision molded with rounded outside corners, and 6/32 x 3/16" deep threaded Brass inserts imbedded in each corner. .125 Thick Walls—Molded Glossy Black Phenolic MIL-M-14, CFG.

**PANELS:** Mount flush inside of Case, holes drilled in panel positioned for the inserts.

**PHENOLIC PANEL:** 3/32" thick glossy black MIL-P-3115 C.

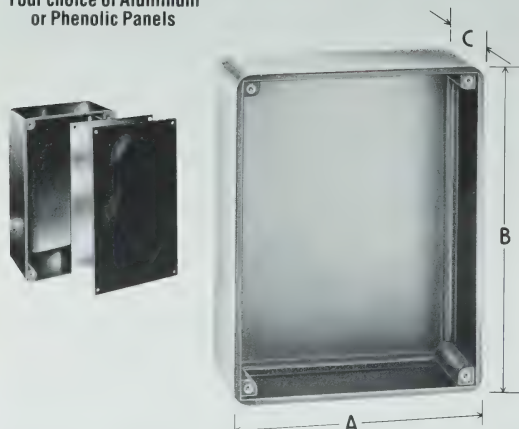
**ALUMINUM PANEL:** .065 thick, #5052-H34 per QQ 318 C. Bright finished surface covered with an easily removed pressure sensitive paper.

PANELS OR CASES CAN BE FABRICATED TO YOUR SPECIFICATIONS

SEND PRINT OR SKETCH FOR QUOTATION

Purchase with or without panels to match

Your choice of Aluminum or Phenolic Panels



Case Only Cat. No.	A	B	C	Black Phenolic Panel Only CAT. NO.	Aluminum Panel Only CAT. NO.
*703	2.875	4.000	1.562	2042	2044
**705	2.875	4.000	1.562	2042	2044
*704	3.125	5.875	2.500	2043	2045
700	3.750	6.250	2.000	2037	2046
701	5.250	6.812	2.312	2038	2047
702	7.375	8.375	3.000	2039	2048

TOLERANCE: PLUS OR MINUS .032

\*703 and 704 HAVE 4-40 TAPPED HOLES IN EACH CORNER – NO BRASS INSERT.

\*\*705 MOUNTING HOLES UNTAPPED – USE #4 SELF TAPPING SCREW.

## PLASTIC INSTRUMENT CASES

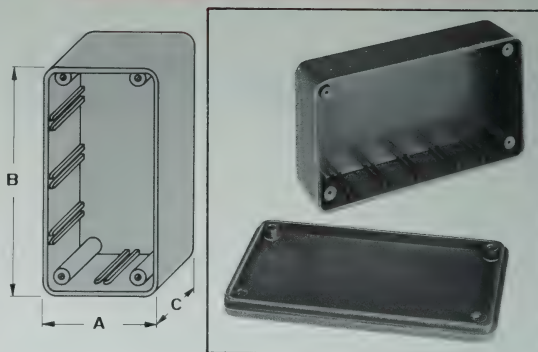
- LOW COST • CHOICE OF 5 SIZES • STURDY CONSTRUCTION

Economical cases molded of high impact styrene. Mating cover has interlocking flange on lid, countersunk holes for flush mounting. Internal grooved guides to hold P.C. boards and circuit cards from .062 to .093 thick.

COLOR OF CASE AND LID BLUE

IDEAL FOR PROTO-TYPE OR PRODUCTION USAGE

SUPPLIED COMPLETE WITH COVER AND FOUR SCREWS



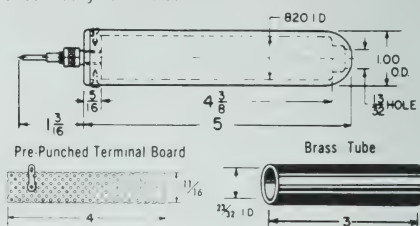
Cat. No.	A	B	C
760	2.000	4.000	.812
761	2.437	4.375	1.062
762	2.500	4.750	1.400
763	3.150	6.000	1.840
764	4.330	7.500	2.220

## TEST PROBE KITS

- PRECISION MOLDED • EASILY BUILT • LOW COST • STURDY



A quality, durable accessory for Signal Generators, VTVM, Oscilloscopes etc., can be built by using the No. 1810 Test Probe Kit. It is designed to contain circuitry required for Signal Tracers, Demodulator, Attenuator and Isolation Probes. Easily assembled.



**KIT CONSISTS OF:** One each (unassembled) Black Hi-Impact Plastic Handle, Black Phenolic Cap, Pre-Punched Terminal Board and Terminals (Push-In Type), Brass Shield, Senior Solderless Brass N. P. Phone Tip and Screws for fastening Cap to Handle.

**CAT. No. 1810**

**KIT CONSISTS OF:** One each (unassembled) Probe Handle and Cap with Solderless Phone Tip only. (Less Terminal Board, Terminals and Brass Tube.)

**CAT. No. 1811**



# NYLON AND FIBRE WASHERS



## FLAT WASHERS-NYLON & FIBRE

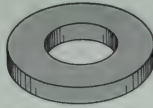
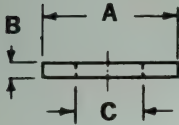
### AVAILABLE FROM STOCK

We can manufacture many other sizes in a selection of materials.

#### Material:

Fibre: Commercial per MIL-F-1148A, Grade CH

Nylon: Grade 6/6 per ASTM D4066

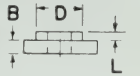
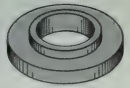


MATERIAL	SCREW SIZE	C I.D.	A O.D.	B THICKNESS		
				.032 Cat. No.	.047 Cat. No.	.062 Cat. No.
FIBRE	#2	.098	.187	3111	3148	3366
			.250	3112	3149	3367
			.312	3113	3150	3194
NYLON	#2	.098	.187	3114	3151	3356
			.250	3347	3152	3357
			.312	3115	3153	3195
FIBRE	#4	.120	.250	3116	3154	3368
			.312	348	3155	3196
			.375	3117	3156	3197
NYLON	#4	.120	.250	3348	345	3358
			.312	3359	3157	3198
			.375	3118	3158	3200
FIBRE	#6	.140	.250	3119	3159	3369
			.312	3120	3160	3370
			.375	3121	3161	3201
NYLON	#6	.140	.250	3122	3162	3360
			.312	3349	346	3361
			.375	3123	3163	3202
FIBRE	#8	.171	.312	3124	3164	3203
			.375	3125	3165	3372
			.437	3126	3166	3204
NYLON	#8	.171	.312	3127	3167	3205
			.375	3350	3168	3363
			.437	3128	3169	3206
FIBRE	#10	.196	.312	349	3170	3207
			.375	3129	3171	3208
			.437	3130	3172	3209
NYLON	#10	.196	.500	3131	3173	3210
			.312	3364	3174	3211
			.375	3352	3175	3212
FIBRE	1/4	.260	.437	3132	3176	3213
			.500	3133	3177	3214
			.437	3134	3178	3215
NYLON	1/4	.260	.500	3135	3179	3373
			.625	3136	3180	3216
			.750	3137	3181	3217
FIBRE	3/8	.385	.437	3138	3182	3218
			.500	3353	3183	3365
			.625	3139	3184	3219
NYLON	3/8	.385	.750	3140	3185	3220
			.500	3141	3186	3221
			.625	3142	3187	3222
FIBRE	1/2	.500	.750	3143	3188	3223
			1.000	3144	3189	3224
			.500	3145	3190	3225
NYLON	1/2	.500	.625	3354	3191	3226
			.750	3146	3192	3227
			1.000	3147	3193	3228

## FIBRE SHOULDER WASHERS

Material: Fibre, Commercial per MIL-F-1148A, Grade CH

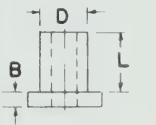
CAT. NO.	SCREW SIZE	L	A	B	C	D
3229	#2	.025	.250	.047	.093	.123
3061	#2	.025	.250	.047	.093	.156
344	#4	.015	.312	.062	.125	.203
343	#4	.025	.312	.062	.125	.203
3062	#4	.031	.250	.031	.115	.187
3230	#4	.031	.281	.062	.115	.175
3231	#4	.031	.312	.062	.120	.180
4698	#6	.031	.250	.062	.140	.187
3064	#6	.031	.312	.062	.140	.187
3232	#6	.031	.375	.062	.140	.210
3233	#6	.031	.375	.062	.140	.240
3234	#6	.031	.500	.062	.140	.240
3065	#8	.031	.375	.062	.170	.246
3066	#8	.031	.417	.062	.170	.210
3235	#8	.031	.312	.062	.170	.218
3236	#8	.031	.375	.062	.170	.215
3237	#8	.031	.500	.062	.170	.240
4702	#10	.031	.375	.062	.194	.308
3238	#10	.031	.375	.062	.194	.240
3239	#10	.031	.500	.062	.196	.240
4711	1/4	.031	.500	.062	.253	.308
3240	1/4	.031	.625	.062	.265	.359
3069	3/8	.031	.625	.062	.385	.498
3241	3/8	.031	.750	.062	.385	.498



## NYLON SHOULDER WASHERS/BUSHINGS

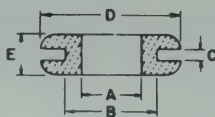
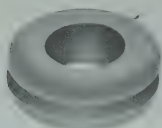
Material: Nylon, Grades 6/6 per ASTM D4066

CAT. NO.	SCREW SIZE	L	A	B	C	D
7680	#2	.025	.260	.030	.095	.154
3051	#2	.125	.181	.047	.090	.120
3101	#2	.187	.181	.047	.090	.120
3052	#2	.250	.181	.047	.090	.120
3049	#4	.031	.218	.040	.115	.135
7681	#4	.047	.250	.032	.115	.185
3053	#4	.093	.235	.047	.115	.145
3102	#4	.125	.235	.047	.115	.145
3103	#4	.187	.235	.047	.115	.145
340	#4	.250	.235	.047	.115	.145
7682	#6	.032	.385	.062	.145	.240
7683	#6	.032	.250	.062	.140	.187
7684	#6	.032	.312	.062	.140	.187
3054	#6	.125	.290	.047	.140	.170
3104	#6	.187	.290	.047	.140	.170
341	#6	.250	.290	.047	.140	.170
3055	#6	.500	.290	.047	.140	.170
7685	#8	.032	.375	.032	.171	.250
3056	#8	.140	.344	.062	.171	.205
3105	#8	.250	.344	.062	.171	.205
342	#8	.375	.344	.062	.171	.205
3106	#8	.500	.344	.062	.171	.205
7686	#10	.032	.375	.062	.196	.308
3107	#10	.093	.438	.062	.200	.260
3108	#10	.250	.399	.062	.200	.260
3057	#10	.500	.399	.062	.200	.260
3058	#10	.750	.399	.062	.200	.260
7687	1/4	.032	.437	.032	.253	.310
7688	1/4	.078	.500	.032	.265	.318
3059	1/4	.187	.513	.062	.260	.312
3109	1/4	.250	.513	.062	.260	.312
3110	1/4	.375	.513	.062	.260	.312
3060	1/4	.500	.513	.062	.260	.312



**RUBBER GROMMETS**

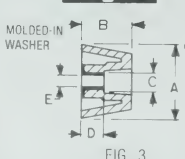
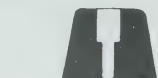
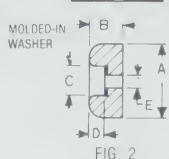
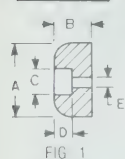
Ideal for electrical insulation and mechanical damping. Made from BUNA S.



Cat. No.	I.D. "A"	For Hole Size "B"	For Panel "C"	"D"	"E"
730	.125	.187	.062	.312	.187
733	.125	.250	.062	.343	.156
734	.125	.437	.062	.625	.187
735	.125	.375	.093	.500	.312
736	.187	.312	.062	.437	.187
731	.187	.312	.062	.437	.218
737	.187	.281	.093	.437	.218
738	.250	.437	.062	.625	.187
739	.250	.375	.062	.500	.218
740	.250	.375	.093	.500	.250
741	.312	.562	.062	.625	.281
742	.312	.437	.062	.625	.281
743	.312	.437	.093	.625	.312
744	.375	.625	.062	.875	.312
745	.375	.500	.062	.625	.250
732	.437	.562	.062	.750	.250
746	.437	.687	.062	.937	.312
747	.500	.812	.062	1.062	.312
748	.500	1.250	.062	1.500	.250
749	.500	.750	.093	.875	.343
750	.562	.812	.062	1.062	.312
752	.625	.875	.062	1.125	.312
753	.625	1.250	.062	1.500	.250
755	.750	1.062	.062	1.375	.375
756	.750	1.437	.062	1.812	.375
757	.875	1.250	.062	1.625	.437

**RECESSED BUMPERS**

Provides excellent traction and shock absorbing qualities. Available with or without Molded-In Washers.

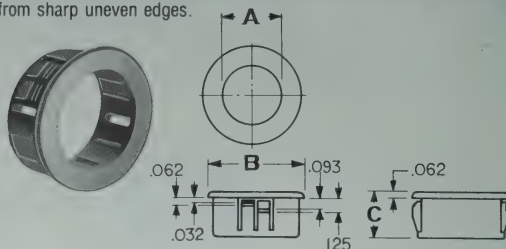


Materials: Rubber, BUNA S. (figs. 1 & 2) Vinyl, (fig. 3)

Cat. No.	Fig.	A	B	C	D	E	Screw Size
720	1	.500	.250	.250	.125	.125	#4
721	1	.625	.312	.250	.187	.125	#4
722	1	.718	.437	.250	.218	.125	#4
723	2	.937	.375	.375	.187	.187	#8
*724	3	.687	.250	.343	.125	.155	#6
*725	3	.875	.312	.406	.187	.187	#8
*726	3	1.062	.437	.468	.234	.200	#10
727	3	.562	.375	.218	.187	.115	#4
728	3	.750	.437	.265	.250	.148	#6
729	3	.937	.625	.359	.328	.174	#8

**NYLON INSULATING BUSHINGS**

Snap into panel hole to provide protection for wire, cable and tubing from sharp uneven edges.

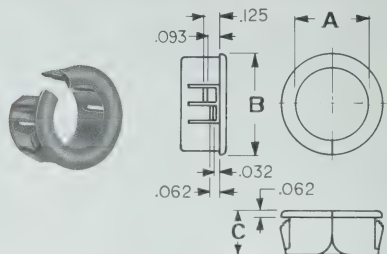


MATERIAL: Nylon 6/6, Black

CAT. NO.	HOLE SIZE REQUIRED	MAXIMUM CHASSIS THICKNESS	A INSIDE DIA.	B HEAD DIA.	C OVERALL HEIGHT
8470	.250	.062	.125	.312	.312
8471	.312	.062	.187	.375	.312
8472	.375	.125	.250	.468	.406
8473	.437	.125	.312	.531	.406
8474	.500	.125	.375	.578	.406
8475	.562	.125	.437	.656	.406
8476	.625	.125	.500	.718	.406
8477	.750	.125	.562	.843	.406
8478	.875	.125	.625	.953	.453
8479	1.000	.125	.750	1.125	.453
8480	1.187	.125	.937	1.312	.453
8481	1.250	.125	.937	1.359	.453
8482	1.375	.125	1.000	1.468	.453
8483	1.500	.125	1.062	1.609	.453
8484	1.750	.125	1.375	1.875	.453
8485	2.000	.125	1.625	2.125	.453
8486	2.500	.250	1.968	2.656	.718

**NYLON SPLIT BUSHINGS**

Designed to be assembled into holes that already contain wire or cable. Versatile bushing can be used on all chassis from 1/32 to 1/8" thick.



MATERIAL: Nylon 6/6, Black

CAT. NO.	HOLE SIZE REQUIRED	A INSIDE DIA.	B HEAD DIA.	C OVERALL HEIGHT
8490	.375	.265	.421	.406
8491	.500	.312	.562	.406
8492	.562	.390	.640	.406
8493	.625	.453	.687	.406
8494	.750	.546	.796	.406
8495	.875	.671	.921	.406
8496	1.000	.796	1.062	.406



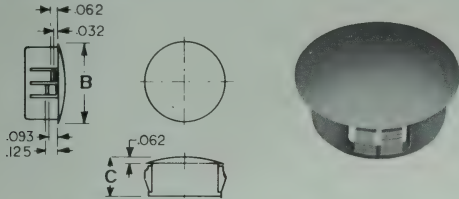
# HOLE PLUGS-CABLE CLAMPS

KEYSTONE



## NYLON HOLE PLUGS

Closes unused chassis holes quickly and economically. Plugs are abrasion and vibration resistant.

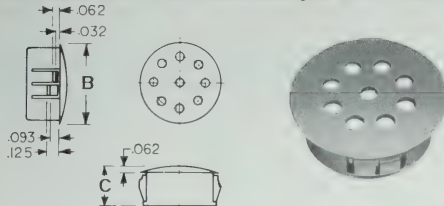


**MATERIAL:** Nylon 6/6, Black Matte Finish

CAT. NO.	HOLE DIA.	PANEL THICKNESS	B	C
8600	.250	.062	.312	.312
8601	.312	.062	.375	.312
8602	.375	.125	.468	.406
8603	.500	.125	.578	.406
8604	.625	.125	.718	.406
8605	.750	.125	.921	.406
8606	.875	.125	1.015	.453
8607	1.000	.125	1.203	.453
8608	1.125	.125	1.218	.453
8609	1.250	.125	1.375	.453
8610	1.375	.125	1.500	.453
8611	1.500	.125	1.671	.453

## NYLON VENT PLUGS

Used to cover chassis holes while allowing air flow for ventilation.



**MATERIAL:** Nylon 6/6, Black Matte Finish

CAT. NO.	HOLE DIA.	PANEL THICKNESS	B	C
8612	.875	.125	1.015	.453
8613	1.000	.125	1.203	.453

## FLEXIBLE GROMMETING

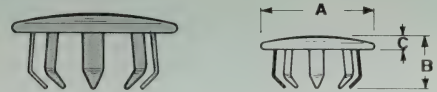
Ideal for maintenance, short-run production, R&D or prototyping. Supplied in 25 ft. rolls. Make your own grommets to fit any size or shape required. Black Nylon Type 6/6, fungus resistant to MIL-M-20693a, Type 1.



CAT. NO.	A	B	C	D	E
8615	.052	.150	.040	.190	.125
8616	.085	.155	.045	.200	.162
8617	.125	.155	.045	.220	.206

## STEEL HOLE PLUGS

Excellent spring retention. Plugs will cover chassis holes, wiring outlets, access holes or unused openings.

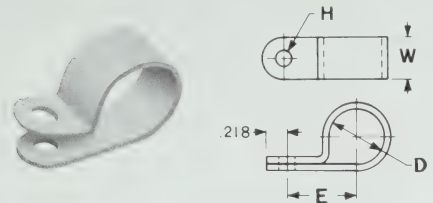


**Material:** Steel, Nickel Plated.

CAT. NO.	Hole Dia.	Panel Thickness	A	B	C	Prongs
7600	.250	.032-.062	.406	.234	.062	6
7601	.312	.047-.078	.437	.250	.062	6
7602	.375	.047-.062	.500	.234	.062	6
7603	.500	.031-.062	.656	.281	.078	8
7604	.625	.062-.093	.812	.296	.078	8
7605	.750	.062-.093	.921	.296	.078	12
7606	.875	.062-.093	1.062	.296	.062	12
7607	1.000	.062-.156	1.140	.328	.093	12
7608	1.125	.031-.125	1.312	.343	.093	12
7609	1.250	.062-.093	1.437	.343	.093	12
7610	1.375	.031-.125	1.562	.406	.078	12
7611	1.500	.031-.062	1.640	.406	.093	12

## NYLON CABLE CLAMPS

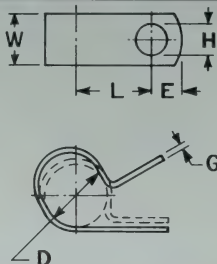
Ideal for securing, insulating and routing cable wiring, piping, tubing, components and fibre optics. Made of .050 thk. Nylon 6/6, white.



CAT. NO.	D	E	W	H
7620	.125	.325	.375	.140
7621	.125	.325	.375	.203
7622	.187	.380	.375	.140
7623	.187	.380	.375	.203
7624	.250	.410	.375	.140
7625	.250	.410	.375	.203
7626	.312	.445	.375	.140
7627	.312	.445	.375	.203
7628	.375	.475	.375	.140
7629	.375	.475	.375	.203
7630	.437	.525	.375	.140
7631	.437	.525	.375	.203
7632	.500	.550	.375	.140
7633	.500	.550	.375	.203
7634	.562	.625	.500	.203
7635	.625	.660	.500	.203
7636	.750	.785	.500	.203
7637	.875	.845	.500	.203
7638	1.000	.910	.500	.203
7639	1.125	.970	.500	.203
7640	1.250	1.060	.500	.203

## STEEL CABLE CLAMPS

**MATERIAL:** CR Steel, C-1010

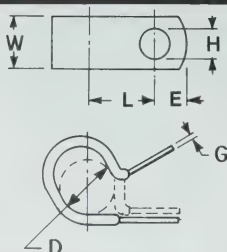
**FINISH:** Zinc Plated


CAT. NO.	D FOR DIA	H HOLE DIA	L CTR TO CTR	W	E HOLE CTR	G THK
8100	.187	.203	.375	.500	.218	.032
8101	.250	.203	.406	.500	.218	.032
8102	.312	.203	.437	.500	.218	.032
8103	.375	.203	.468	.500	.218	.032
8104	.437	.203	.500	.500	.218	.032
8105	.500	.203	.531	.500	.218	.032
8106	.562	.203	.562	.500	.218	.032
8107	.625	.203	.594	.500	.218	.032
8108	.687	.203	.625	.500	.218	.032
8109	.750	.203	.656	.500	.218	.032
8110	.812	.203	.687	.500	.218	.032
8111	.875	.203	.718	.500	.218	.032
8112	.937	.203	.750	.500	.218	.032
8113	1.000	.203	.781	.500	.218	.032

## INSULATED STEEL CABLE CLAMPS

**MATERIAL:** CR Steel, C-1010

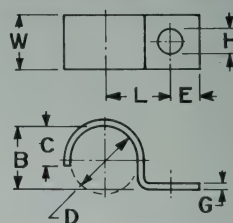
**FINISH:** Zinc Plated

**CUSHION:** Black Vinyl, 1/32" Thick


CAT. NO.	D FOR DIA	H HOLE DIA	L CTR TO CTR	W	E	G THK
8120	.125	.203	.375	.500	.218	.032
8121	.187	.203	.406	.500	.218	.032
8122	.250	.203	.437	.500	.218	.032
8123	.312	.203	.468	.500	.218	.032
8124	.375	.203	.500	.500	.218	.032
8125	.437	.203	.531	.500	.218	.032
8126	.500	.203	.562	.500	.218	.032
8127	.562	.203	.594	.500	.218	.032
8128	.625	.203	.625	.500	.218	.032
8129	.687	.203	.656	.500	.218	.032
8130	.750	.203	.687	.500	.218	.032
8131	.812	.203	.718	.500	.218	.032
8132	.875	.203	.750	.500	.218	.032
8133	.937	.203	.781	.500	.218	.032
8134	1.000	.203	.812	.500	.218	.032

## STEEL HALF CLAMPS

**MATERIAL:** CR Steel, C-1010

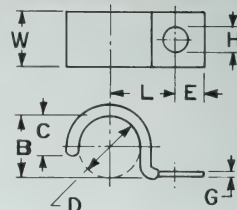
**FINISH:** Zinc Plated


CAT. NO.	D FOR DIA	H HOLE DIA	L CTR TO CTR	E	B	C	G THK	W
8140	.125	.218	.437	.250	.125	.093	.032	.500
8141	.187	.218	.437	.250	.156	.093	.032	.500
8142	.250	.218	.437	.250	.187	.156	.032	.500
8143	.312	.218	.500	.250	.250	.187	.048	.500
8144	.375	.218	.531	.312	.312	.218	.048	.625
8145	.437	.218	.562	.312	.375	.281	.048	.625
8146	.500	.218	.625	.312	.437	.312	.060	.625
8147	.562	.218	.687	.312	.500	.343	.060	.625
8148	.625	.218	.750	.312	.562	.437	.060	.625
8149	.687	.218	.812	.312	.625	.406	.060	.625
8150	.750	.218	.812	.312	.687	.437	.060	.625
8151	.812	.218	.875	.312	.750	.468	.060	.625
8152	.875	.281	.937	.375	.812	.531	.060	.750
8153	.937	.281	.968	.437	.812	.593	.060	.750
8154	1.000	.281	1.000	.437	.937	.625	.060	.750

## INSULATED STEEL HALF CLAMPS

**MATERIAL:** CR Steel, C-1010

**FINISH:** Zinc Plated

**CUSHION:** Black Vinyl, 1/32" Thick


CAT. NO.	D FOR DIA	H HOLE DIA	L CTR TO CTR	E	B	C	G THK	W
8160	.187	.218	.437	.250	.187	.156	.032	.500
8161	.250	.218	.500	.250	.250	.187	.048	.500
8162	.312	.218	.531	.312	.312	.218	.048	.625
8163	.375	.218	.562	.312	.375	.281	.048	.625
8164	.437	.218	.625	.312	.437	.312	.060	.625
8165	.500	.218	.687	.312	.500	.343	.060	.625
8166	.562	.218	.750	.312	.562	.437	.060	.625
8167	.625	.218	.812	.312	.625	.406	.060	.625
8168	.687	.218	.812	.312	.687	.437	.060	.625
8169	.750	.218	.875	.312	.750	.468	.060	.625
8170	.812	.281	.937	.375	.812	.531	.060	.750
8171	.875	.281	.968	.437	.812	.593	.060	.750
8172	.937	.281	1.000	.437	.937	.625	.060	.750
8173	1.000	.281	1.062	.437	1.000	.687	.060	.750



# SCORED TURRET TERMINAL BOARDS

KEYSTONE



## STANDARD TURRET TERMINAL BOARDS

Cut your production cost by eliminating the tooling and setup charge usually applied to nonstandardized boards. Terminals are securely riveted and hot tinned for easy soldering.

**TERMINALS:** Brass, QQ-B-626, COMP. 22, 1/2 HARD.

Terminals are staked in all holes except end mounting holes.

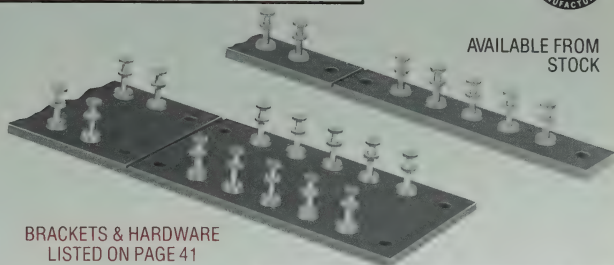
**PLATING:** BRIGHT ELECTRO TIN, MIL-F-14072. Recommended for longer shelf life and better solderability. Other platings can be furnished.

**MATERIAL:** Your choice of either PBE or GEE phenolic.

**PBE:** Paper base electrical, MIL-P-3115C, Type XXXP natural, Temp. 250 deg. F max.

**GEE:** Glass epoxy, MIL-P-18177, type G-10. 300 deg. F max.

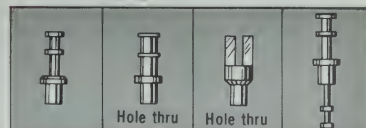
**MODIFICATIONS:** Boards can be modified with other materials or terminals of your choice. Can be supplied with terminals staked in all holes or without terminals staked. Marking can be added. Prices on request.



AVAILABLE FROM STOCK

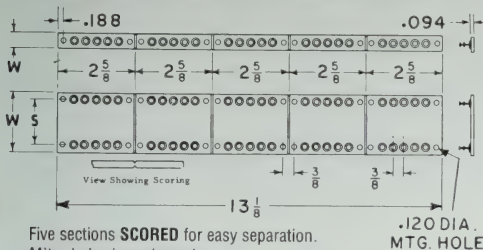
BRACKETS & HARDWARE LISTED ON PAGE 41

ALL TERMINAL DRAWINGS ARE ACTUAL SIZE. CHOICE OF TERMINALS



## 3/8" SPACING AND SCORED

3/32" THICK PHENOLIC - Choice of 4 Types of Terminals  
Overall Length of Board 13 1/8", Five 2 5/8" Sections

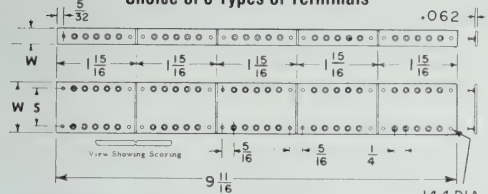


Five sections SCORED for easy separation.  
M'tg. holes in each section.

W	S	NO. OF TERMS.	MATERIAL	WITH 1503 TERM. CAT. NO.	WITH 1509 TERM. CAT. NO.	WITH 1507 TERM. CAT. NO.	WITH 1545 TERM. CAT. NO.
1/2	Single Row	25	PBE	15031	15091	15071	15041
			GEE	15231	15291	15271	15241
1 1/2	1	50	PBE	15032	15092	15072	15042
			GEE	15232	15292	15272	15242
1 1/2	1 3/16	50	PBE	15036	15096	15076	15046
			GEE	15236	15296	15276	15246
2	1 1/2	50	PBE	15033	15093	15073	15043
			GEE	15233	15293	15273	15243
2 1/2	2	50	PBE	15034	15094	15074	15044
			GEE	15234	15294	15274	15244
3	2 1/2	50	PBE	15035	15095	15075	15045
			GEE	15235	15295	15275	15245

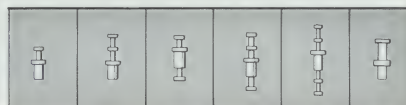
## MINIATURE TURRET TERMINAL BOARDS

1/4" SPACING AND SCORED - 1/16" THICK PHENOLIC  
Overall Length of Board is 9 11/16", Five 1 5/16" Sections  
Choice of 6 Types of Terminals



Five sections SCORED for easy separation.  
M'tg. holes in each section.

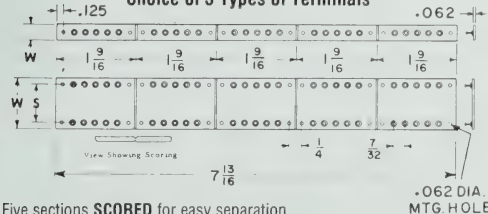
ALL TERMINAL DRAWINGS ARE ACTUAL SIZE. CHOICE OF TERMINALS



W	S	NO. OF TERMS.	MATERIAL	WITH 1572 TERM. CAT. NO.	WITH 1573 TERM. CAT. NO.	WITH 1574 TERM. CAT. NO.	WITH 1575 TERM. CAT. NO.	WITH 1583 TERM. CAT. NO.	WITH 1559 TERM. CAT. NO.
5/16	Single Row	25	PBE	15047	15057	15067	15077	15087	15097
			GEE	15247	15257	15267	15277	15287	15297
7/8	9/16	50	PBE	15048	15058	15068	15078	15088	15098
			GEE	15248	15258	15268	15278	15288	15298
1 1/8	1 3/16	50	PBE	15049	15059	15069	15079	15089	15099
			GEE	15249	15259	15269	15279	15289	15299

## MINIATURE TURRET TERMINAL BOARDS

7/32" SPACING AND SCORED - 1/16" THICK PHENOLIC  
Overall Length of Board 7 13/16", Five 1 1/16" Sections  
Choice of 5 Types of Terminals



Five sections SCORED for easy separation,  
M'tg. holes in each section.

ALL TERMINAL DRAWINGS ARE ACTUAL SIZE. CHOICE OF TERMINALS



W	S	NO. OF TERMS.	MATERIAL	WITH 1502 TERM. CAT. NO.	WITH 1562 TERM. CAT. NO.	WITH 1526 TERM. CAT. NO.	WITH 1512 TERM. CAT. NO.	WITH 1533 TERM. CAT. NO.
5/16	Single Row	25	PBE	15021	15023	15025	15063	15053
			GEE	15221	15223	15225	15263	15253
3/4	1/2	50	PBE	15028	15029	15026	15064	15054
			GEE	15228	15229	15226	15264	15254
1	3/4	50	PBE	15022	15024	15030	15065	15056
			GEE	15222	15224	15230	15265	15256

BOARDS ON THIS PAGE  
ARE NOT SCORED

- **SAVE TOOLING**
- **ECONOMICAL**
- **COMPLETE RANGE OF SIZES**
- **DELIVERY FROM STOCK**

**READI-MADE TURRET TERMINAL BOARDS:** Low cost, meets commercial and military specifications. Produced in large quantities, making it possible to eliminate tooling and setup charges usually applied to non-standard boards.

**TERMINALS:** BRASS, QQ-B-626, COMP. 22, 1/2 HARD. Terminals are staked in all holes except end mounting holes.

**PLATING:** BRIGHT ELECTRO TIN, MIL-F-14072. Recommended for longer shelf life and better solderability. Other platings can be furnished.

**MATERIAL:** Your choice of either PBE or GEE phenolic.

PBE: Paper base electrical, FED. LP-513, Type XXXP, natural, Temp. 250 deg. F max.

GEE: Glass epoxy, MIL-P-18177, Type G-10, Temp. 300 deg. F max.

**MODIFICATIONS:** Boards can be modified with other materials or terminals of your choice. Can be supplied with terminals staked in all holes or without terminals staked. Marking can be added. Prices on request.



## TURRET TERMINAL BOARDS 3/8" SPACING

choice of sizes

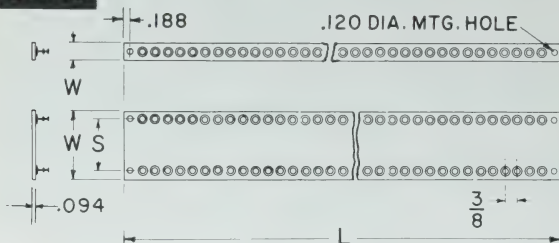


1503  
ACTUAL SIZE

**TERMINAL:** 1503-3

Height above board 23/64"

**MATERIAL:** Choice of PBE or GEE 3/32" thick.



Terminals are staked in all holes except end mounting holes.

SEE BRACKET PAGE FOR SUITABLE MOUNTING HARDWARE.

W	S	L	NO. OF TERMS EACH SIDE	MATERIAL PBE CAT. NO.	MATERIAL GEE CAT. NO.
1/2	Single Row	2 5/8	5	15101	15301
		5 1/4	12	15102	15302
		7 7/8	19	15103	15303
		10 1/2	26	15104	15304
		13 3/8	33	15105	15305
1 3/16	3/4	2 5/8	5	15106	15306
		5 1/4	12	15107	15307
		7 7/8	19	15108	15308
		10 1/2	26	15109	15309
		13 3/8	33	15110	15310
1 1/2	1	2 5/8	5	15111	15311
		5 1/4	12	15112	15312
		7 7/8	19	15113	15313
		10 1/2	26	15114	15314
		13 3/8	33	15115	15315
2	1 1/2	2 5/8	5	15116	15316
		5 1/4	12	15117	15317
		7 7/8	19	15118	15318
		10 1/2	26	15119	15319
		13 3/8	33	15120	15320
2 1/2	2	2 5/8	5	15121	15321
		5 1/4	12	15122	15322
		7 7/8	19	15123	15323
		10 1/2	26	15124	15324
		13 3/8	33	15125	15325
3	2 1/2	2 5/8	5	15126	15326
		5 1/4	12	15127	15327
		7 7/8	19	15128	15328
		10 1/2	26	15129	15329
		13 3/8	33	15130	15330

## MINIATURE TURRET TERMINAL BOARDS 1/4" SPACING

choice of sizes

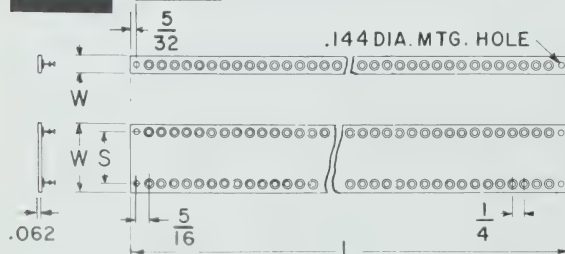


1573  
ACTUAL SIZE

**TERMINAL:** 1573-2

Height above board 3/16"

**MATERIAL:** Choice of PBE or GEE 1/16" thick.



W	S	L	NO. OF TERMS EACH SIDE	MATERIAL PBE CAT. NO.	MATERIAL GEE CAT. NO.
5/16	Single Row	1 15/16	5	15431	15531
		3 11/16	12	15432	15532
		5 7/16	19	15433	15533
		7 3/16	26	15434	15534
		8 15/16	33	15435	15535
7/8	9/16	1 15/16	5	15436	15536
		3 11/16	12	15437	15537
		5 7/16	19	15438	15538
		7 3/16	26	15439	15539
		8 15/16	33	15440	15540
1 1/8	13/16	1 15/16	5	15441	15541
		3 11/16	12	15442	15542
		5 7/16	19	15443	15543
		7 3/16	26	15444	15544
		8 15/16	33	15445	15545



# READI-MADE TURRET TERMINAL BOARDS

KEYSTONE



## MINIATURE TURRET TERMINAL BOARDS

**TERMINALS:** BRASS, QQ-B-626, COMP. 22, 1/2 HARD. Terminals are staked in all holes except end mounting holes.

**PLATING:** BRIGHT ELECTRO TIN, MIL-F-14072. Recommended for longer shelf life and better solderability. Other platings can be furnished.

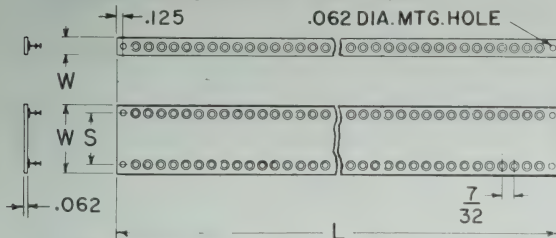
**MATERIAL:** Your choice of either PBE or GEE phenolic, 1/16" thick.

**PBE:** Paper base electrical, FED. LP-513, Type XXXP natural, Temp. 250 deg. F max.

**GEE:** Glass epoxy, MIL-P-18177, Type G-10, Temp. 300 deg. F max.

The 1562 terminal is often specified for support and connection of transistors, resistors and small component parts. There is a .043 dia. hole thru the terminal and it stands 5/32" above the board.

**MODIFICATIONS:** Boards can be modified with other materials or terminals of your choice. Can be supplied with terminals staked in all holes or without terminals staked. Marking can be added. Prices on request.



Terminals are staked in all holes except end mounting holes.

7/32" SPACING

W	S	L	NO. OF TERMS. EACH SIDE	MATERIAL PBE CAT. NO.	MATERIAL GEE CAT. NO.
5/16	Single Row	1 1/16	5	15401	15501
		3 1/32	12	15402	15502
		4 1/8	19	15403	15503
		6 1/32	26	15404	15504
		7 1/16	33	15405	15505
3/4	1/2	1 1/16	5	15406	15506
		3 1/32	12	15407	15507
		4 1/8	19	15408	15508
		6 1/32	26	15409	15509
		7 1/16	33	15410	15510
1	3/4	1 1/16	5	15411	15511
		3 1/32	12	15412	15512
		4 1/8	19	15413	15513
		6 1/32	26	15414	15514
		7 1/16	33	15415	15515

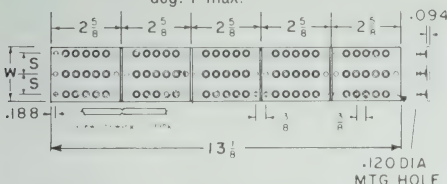
## UNIVERSAL TERMINAL BOARDS

Designed for production or experimental use. Well suited for any electronic application requiring a sturdy mounting surface for resistors, and components.

**MATERIAL:** Your choice of either PBE or GEE phenolic, 3/32" thick.

**PBE:** Paper base electrical, FED. LP-513, Type XXXP natural, Temp. 250 deg. F max.

**GEE:** Glass epoxy, MIL-P-18177, Type G-10, Temp. 300 deg. F max.



NOTE: 5 Sections Scored for easy separation. 3 Rows of Terminals.

3/8" SPACING

W	S	TOTAL NO. OF TERMS.	MATERIAL	CAT. NO.
2 1/2	1	75	PBE	15332
			GEE	15342
3 1/2	1 1/2	75	PBE	15333
			GEE	15343

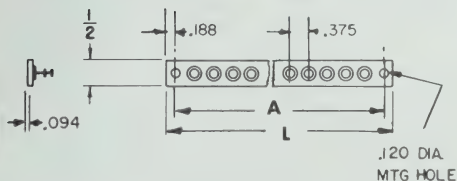
**MODIFICATIONS:**  
Other materials and terminals of your choice supplied. Marking may be added.

## TURRET TERMINAL STRIPS





**MATERIAL:** 3/32" Thick PBE, Nat.

ALL TERMINAL DRAWINGS ARE ACTUAL SIZE. CHOICE OF TERMINALS.

3/8" SPACING



Terminals are staked in all holes except end mounting holes

			
	Hole thru		Hole thru
WITH 1503 TERM. CAT. NO.	WITH 1509 TERM. CAT. NO.5	WITH 1545 TERM. CAT. NO.	WITH 1507 TERM. CAT. NO.
603-1	609-1	604-1	607-1
603-2	609-2	604-2	607-2
603-3	609-3	604-3	607-3
603-4	609-4	604-4	607-4
603-5	609-5	604-5	607-5
603-6	609-6	604-6	607-6
603-7	609-7	604-7	607-7
603-8	609-8	604-8	607-8
603-9	609-9	604-9	607-9
603-10	609-10	604-10	607-10

**MODIFICATIONS:** WE CAN MAKE THESE BOARDS IN LONGER LENGTHS WITH OTHER MATERIALS AND USING ANY OTHER STANDARD TERMINALS

KEYSTONE ELECTRONICS CORP., 31-07 20TH RD., ASTORIA, N.Y. 11105-2017, (718) 956-8900

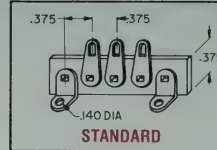


KEYSTONE

# TERMINAL STRIPS AND BOARDS

## TERMINAL STRIPS (Standard & Miniature)

Tin plated steel lugs and brackets. Bakelite XP 1/16" thick. In addition to the strips shown, we manufacture many other varieties in any configuration and materials required. Send samples or sketch for prompt quotation.



STANDARD



MINIATURE



FIG. 1



FIG. 2



FIG. 3



FIG. 4



FIG. 5



FIG. 6



FIG. 7



FIG. 8



FIG. 9



FIG. 10



FIG. 11



FIG. 12



FIG. 13



FIG. 14



FIG. 15



FIG. 16



FIG. 17



FIG. 18



FIG. 19



FIG. 20



FIG. 21



FIG. 22



FIG. 23



FIG. 24



FIG. 25



FIG. 26



FIG. 27



FIG. 28



FIG. 29



FIG. 30



FIG. 31



FIG. 32



FIG. 33



FIG. 34



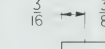
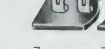
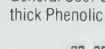
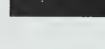
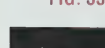
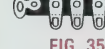
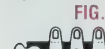
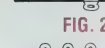
FIG. 35



FIG. 36



FIG. 37



STANDARD CAT. NO.	FIG. NO.	MINIATURE CAT. NO.
800	1	837
801	2	838
802	3	839
803	4	840
804	5	841
805	6	842
806	7	843
807	8	844
808	9	845
809	10	846
810	11	847
811	12	848
812	13	849
813	14	850
814	15	851
815	16	852
816	17	853
817	18	854
818	19	855
819	20	856
820	21	857
821	22	858
822	23	859
823	24	860
824	25	861
825	26	862
826	27	863
827	28	864
828	29	865
829	30	866
830	31	867
831	32	868
832	33	869
833	34	870
834	35	871
835	36	872
836	37	873

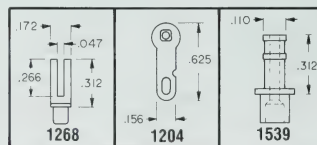
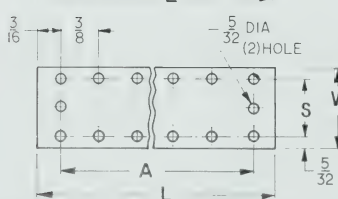
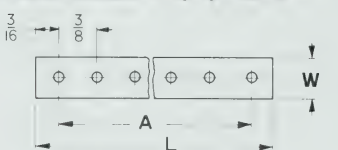
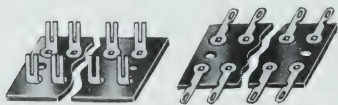
## READI-MADE TERMINAL BOARDS

• SAVE TOOLING COST • APPROVED MATERIALS • RANGE OF SIZES

**READI-MADE TERMINAL BOARDS** are ideal for General Use. Choice of Terminals. **MATERIAL:** 1/16" thick Phenolic.

**TERMINAL:** 1204 and 1268 are stamped from .023 thick brass. 1539 is turned from 3/16" dia. brass rod.

**PLATING:** Bright Electro Tin



ALL  
TERMINAL  
DRAWINGS  
ARE  
ACTUAL  
SIZE

### CHOICE OF TERMINALS

W	L	S	A	TERMINALS EACH SIDE	WITH 1268 TERM. CAT. NO.	WITH 1204 TERM. CAT. NO.	WITH 1539 TERM. CAT. NO.
1	1 7/8	1 1/16	1 1/2	5	1268-10	1204-10	1239-10
1	2 1/4	1 1/16	1 7/8	6	1268-12	1204-12	1239-12
1	5 1/4	1 1/16	4 7/8	14	1268-28	1204-28	1239-28
1 3/4	3 3/4	1 1/16	3 3/8	10	1268-20	1204-20	1239-20
1 3/4	4 1/8	1 1/16	3 3/4	11	1268-22	1204-22	1239-22
1 3/4	7 1/8	1 1/16	6 3/4	19	1268-38	1204-38	1239-38
1/2	7 1/8	Single Row	6 3/4	19	1268-19	1204-19	1239-19



# TERMINAL STRIPS & BOARDS

KEYSTONE



## STANDARD BINDING POST STRIPS

### MATERIAL SPECIFICATIONS

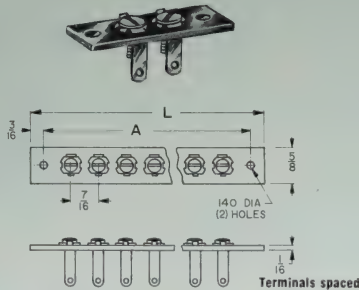
**FIBERGLASS:** Reinforced Polyester NEMA Grade GPO-3 rated for 300° F. (155°C).

**Available from Stock**

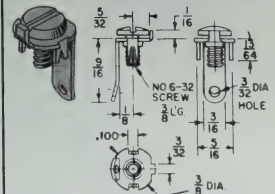
**GEE:** Glass Epoxy, MIL P-18177 temp., 300° F. Max. type G-10

**PBE:** Paper base electrical, FED. LP-513 Type XP natural, Temp. 250 deg. F max.

1/16" THICK MATERIAL 5/8" WIDE					
XP PHENOLIC CAT. NO.	GLASS EPOXY CAT. NO.	FIBER-GLASS CAT. NO.	L LENGTH	A MTG. C'TRS.	NO. TERM
4187	4177	4167	1 1/4	7/8	1
4188	4178	4168	1 1/2	1 1/8	2
4189	4179	4169	2 1/8	1 3/8	3
4190	4180	4170	2 3/8	2 1/8	4
4191	4181	4171	3	2 3/8	5
4192	4182	4172	3 1/8	3 1/8	6
4193	4183	4173	3 3/8	3 1/2	7
4194	4184	4174	4 1/8	3 3/8	8
4195	4185	4175	4 3/8	4 1/8	9
4196	4186	4176	5 1/8	4 1/2	10



Terminals supplied on these strips



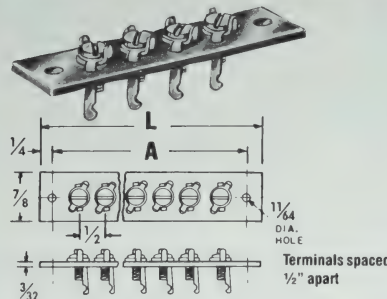
Terminal: Brass - Cadmium Plated  
Screw: Steel - Cadmium Plated

CAT. NO. 1248

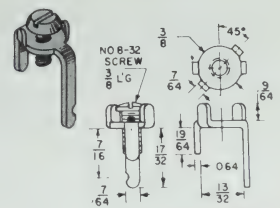
## HEAVY DUTY BINDING POST STRIPS

### 3/32" THICK MATERIAL 7/8" WIDE

GLASS EPOXY CAT. NO.	FIBER-GLASS CAT. NO.	L LENGTH	A MTG. C'TRS.	NO. TERM
4147	4157	1 1/2	1	1
4148	4158	2	1 1/2	2
4149	4159	2 1/2	2	3
4150	4160	3	2 1/2	4
4151	4161	3 1/2	3	5
4152	4162	4	3 1/2	6
4153	4163	4 1/2	4	7
4154	4164	5	4 1/2	8
4155	4165	5 1/2	5	9
4156	4166	6	5 1/2	10



Terminals supplied on these strips



Terminal: Brass - Hot Tin Dipped  
Screw: Brass - Nickel Plated

CAT. NO. 1209

## KWIK DISCONNECT TERMINAL STRIPS

**KWIK** disconnect boards permit solderless connections of several circuits to a common feed line. For temporary or permanent connections. Eliminates excess wiring and soldering.

**MATERIAL:** Fiberglass - NEMA GRADE GPO-3. A glass polyester rated for continuous operation at 155°C or 300°F. 1/16" thick.

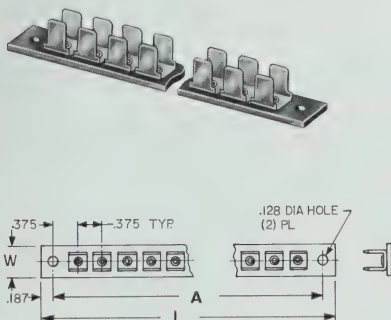
**BACKING STRIPS:** 1/32" thick fibre with mounting holes drilled only.

**TERMINALS:** Brass. PER MIL SPEC QQ-B-613.

CAT. NO. 1254 .018 Thick, Bright Electro Tin MIL-F-14072.

CAT. NO. 1257 .032 Thick Bright Brass

Other platings available on special order.

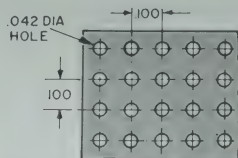


MATERIAL 1/16" THICK FIBERGLASS

.205 TAB				.250 TAB			
1254				1257			
W WIDTH	L LENGTH	A MTG. C'TRS	NO. TERM. EACH SIDE	CAT. NO.	BACKING STRIP CAT. NO.	CAT. NO.	CAT. NO.
1/2	1 1/2	1 1/8	2	4056	4401	4116	
	2 1/4	1 1/8	4	4057	4402	4117	
	3	2 1/8	6	4058	4403	4118	
	3 3/4	3 1/8	8	4059	4404	4119	
	4 1/2	4 1/8	10	4060	4405	4120	

## MICRO-MINIATURE BREADBOARDS WITH .042 DIA. HOLES

- FOR MODULE STACKS
- SMALLER PLUG-IN CARDS POSSIBLE
- PERMITS HIGHER COMPONENT DENSITY FOR SUBMINIATURE CIRCUITRY



### 1/16" PATTERN .042 HOLES .100 x .100

WIDTH & LENGTH	NO. HOLES W & L	GLASS EPOXY	GLASS EPOXY COP. CLAD (1 SIDE)	XXXP NATURAL PHENOLIC
<b>1/32 THICK MATERIAL</b>				
2.00 x 4.50	19 x 44	4225	4234	—
2.00 x 6.00	19 x 59	4226	4235	—
4.50 x 6.00	44 x 59	4227	4236	—
6.00 x 17.00	59 x 169	4228	4237	—
<b>3/64 THICK MATERIAL</b>				
2.00 x 4.50	19 x 44	4229	4238	—
2.00 x 6.00	19 x 59	4230	4239	—
4.50 x 6.00	44 x 59	4231	4240	—
6.00 x 17.00	59 x 169	4232	4241	—
<b>1/16 THICK MATERIAL</b>				
2.00 x 4.50	19 x 44	3405	3415	3396
2.00 x 6.00	19 x 59	3406	3416	3397
2.73 x 17.00	26 x 169	3407	3417	3398
3.00 x 4.50	29 x 44	3408	3418	3399
4.50 x 6.00	44 x 59	3409	3419	3400
4.50 x 6.50	44 x 64	3410	3420	3404
4.50 x 8.50	44 x 84	3411	3421	3425
4.50 x 17.00	44 x 169	3412	3422	3426
6.00 x 17.00	59 x 169	3413	3423	3427

Micro Pins For Above See Page 64

## PUSH-IN TERMINALS For .042 DIA. HOLE

Easily press-fit into a .042 dia. hole without staking or the base may be flared for permanent installations. Ideally designed for use in micro-circuitry to support components when space is at a premium.

**MATERIAL:** .008 thick Beryllium Copper. **FINISH:** Bright Tin



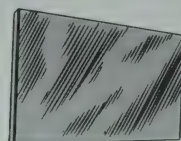
CAT. NO.  
1495

INSERTION TOOL CAT. NO. 1322

## STANDARD LAMINATED PHENOLIC MATERIAL

The finest grade laminated phenolic sheets used in our production fabrication. Available in a range of standard or special sizes cut to order in a variety of materials.

- RANGE OF SIZES
- SPECIAL SIZES CUT TO ORDER
- CERTIFIED MATERIAL



CHOICE OF

XXXP  
GLASS EPOXY  
COPPER CLAD  
FIBERGLASS

SIZE WIDTH & LENGTH	XXXP NATURAL	GLASS EPOXY	XXXP COP. CLAD (1 SIDE)	XXXP COP. CLAD (2 SIDES)	GLASS EPOXY COP. CLAD (1 SIDE)	GLASS EPOXY COP. CLAD (2 SIDES)	FIBER-GLASS POLY-ESTER
<b>1/16" THICK MATERIALS</b>							
	CAT. NO.	CAT. NO.	CAT. NO.	CAT. NO.	CAT. NO.	CAT. NO.	CAT. NO.
0.31 x 7.81	2006	2022	-	-	-	-	2304
0.75 x 7.81	2020	2023	-	-	-	-	2305
1.00 x 7.81	2021	2024	-	-	-	-	2306
2.00 x 4.50	1970	1978	1985	1992	1999	2013	2307
2.25 x 3.00	1971	1979	1986	1993	2007	2014	2308
3.00 x 4.50	1972	1980	1987	1994	2008	2015	2309
4.50 x 6.50	1973	1981	1988	1995	2009	2016	2310
4.50 x 8.50	1974	1982	1989	1996	2010	2017	2311
8.50 x 17.00	1975	1983	1990	1997	2011	2018	2312
9.00 x 12.00	1976	1984	1991	1998	2012	2019	2313

## PROTOTYPE KIT

An essential "Do-It-Yourself" building block for experimental or production runs

For construction of 1/16" and 3/32" thick terminal boards. This is the least expensive way to purchase a complete assortment of basic materials and staking tools needed. Ideal for experimental or short production runs. SAVE COSTLY TOOLING AND SETUP CHARGES. Kit consists of 1/16" and 3/32" bakelite, blank and pre-punched boards. Assortment of hardware such as eyelets, terminals, brackets, bushings and push-in terminals. A complete terminal staking tool kit and instructions.

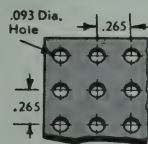


CAT. NO. 1723

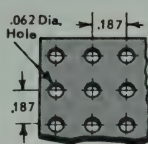


### STANDARDIZED PERFORATED BAKELITE BOARDS

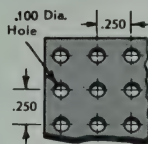
- Time Saving
- Economical
- Permits Flexibility of Circuit Design
- Six Popular Patterns for Most Applications



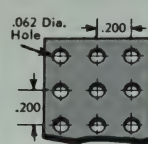
"A" PATTERN



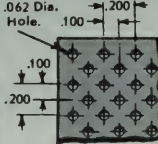
"B" PATTERN



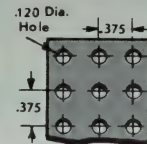
"E" PATTERN



"F" PATTERN



"G" PATTERN



"H" PATTERN

**STANDARDIZED KEYBOARDS:** Permits time saving, low cost, assembly of components. Used extensively in development of prototype breadboarding, test design or production runs. A large selection of sizes and materials offers the designer the flexibility and convenience needed to create special circuitry on short notice.

**ELECTRONIC HARDWARE:** A large selection of turret, push-in and stamped terminals, brackets, eyelets, etc. available from stock.

**STAKING TOOLS:** Inexpensive tooling supplied for staking eyelets, bushings, turret terminals, etc. You can do an entire assembly at your bench with ease, using our impact tool. Other tools for arbor, kickpress, drill press. See Staking Tool page.

**SPECIAL SERVICES:** We will install eyelets or terminals to suit your application. We invite inquiries for special sizes or additional holes drilled. Prompt quotations rendered at no cost to you.

**MATERIAL:** XXXP NATURAL (MIL-P-3115C, TEMP. 250°F MAX.) 1/16 AND 3/32 THICK  
G-10 GLASS EPOXY (MIL-P-18177, TEMP. 300°F MAX.) 1/16 THICK

#### "A" PATTERN

.093 DIA. HOLES ON .265 X .265 CENTERS

SIZE WIDTH & LENGTH	NO. OF HOLES	XXXP NAT. CAT. NO.	GLASS EPOXY CAT. NO.
<b>.062 THICK (1/16")</b>			
1.88 x 8.50	7 x 32	1737	1791
2.44 x 8.50	9 x 32	1738	1788
3.25 x 8.50	13 x 32	1785	1789
3.25 x 17.00	13 x 64	1786	1787
4.88 x 8.88	18 x 18	1806	1807
4.88 x 17.00	18 x 64	1739	1793
8.50 x 8.50	32 x 32	1732	1794
8.50 x 17.00	32 x 64	1733	1795

**.093 THICK (3/32")**

SIZE WIDTH & LENGTH	NO. OF HOLES	XXXP NAT. CAT. NO.	GLASS EPOXY CAT. NO.
1.38 x 4.00	5 x 15	1760	—
3.25 x 8.50	13 x 32	1814	—
4.88 x 8.50	18 x 32	1756	—
4.88 x 17.00	18 x 64	1742	—
8.50 x 17.00	32 x 64	1757	—

#### "B" PATTERN

.062 DIA. HOLES ON .187 x .187 CENTERS

SIZE WIDTH & LENGTH	NUMBER OF HOLES	XXXP NATURAL CAT. NO.
<b>.062 THICK (1/16")</b>		
2.44 x 3.38	12 x 17	1812
2.84 x 8.50	15 x 45	1735
3.66 x 6.75	19 x 35	1824
5.69 x 8.50	30 x 45	1762
5.69 x 17.00	30 x 90	1736
6.75 x 7.31	35 x 39	1826
8.50 x 17.00	45 x 90	1763

#### "E" PATTERN

100 DIA. HOLES ON .250 x .250 CENTERS

SIZE WIDTH & LENGTH	NUMBER OF HOLES	XXXP NATURAL CAT. NO.
<b>.062 THICK (1/16")</b>		
2.13 x 4.00	8 x 16	1750
2.13 x 8.50	8 x 34	1765
3.63 x 8.50	14 x 34	1766
8.50 x 8.50	34 x 34	1767
8.50 x 17.00	34 x 68	1768
<b>.093 THICK (3/32")</b>		
2.13 x 8.50	8 x 34	1770
8.50 x 8.50	34 x 34	1771
8.50 x 17.00	34 x 68	1772

#### "F" PATTERN

.062 DIA. HOLES ON .200 x .200 CENTERS

SIZE WIDTH & LENGTH	NO. OF HOLES	XXXP NAT. CAT. NO.	GLASS EPOXY CAT. NO.
<b>.062 THICK (1/16")</b>			
1.25 x 8.50	6 x 42	1730	1844
3.00 x 4.50	15 x 22	1835	1845
3.63 x 8.50	18 x 42	1773	1854
4.50 x 6.50	22 x 30	1868	1870
4.50 x 8.50	22 x 42	1869	1871
4.88 x 8.50	24 x 42	1774	1872
4.88 x 17.00	24 x 85	1776	1873
8.50 x 8.50	42 x 42	1777	1874
8.50 x 17.00	42 x 45	1778	1875

#### "G" PATTERN

.062 DIA. HOLES ON .200 x .100 ALT. C

SIZE WIDTH & LENGTH	NO. OF HOLES	XXXP NAT. CAT. NO.	GLASS EPOXY CAT. NO.
<b>.062 THICK (1/16")</b>			
2.25 x 8.50	(11x42)x2	1754	1910
3.50 x 4.00	(17x19)x2	1753	1911
3.50 x 8.50	(17x42)x2	1905	1912
3.50 x 17.00	(17x85)x2	1906	1913
3.88 x 8.50	(19x42)x2	1907	1914
4.88 x 8.50	(24x42)x2	1908	1915
4.88 x 17.00	(24x85)x2	1779	1916
8.50 x 8.50	(42x42)x2	1780	1917
8.50 x 17.00	(42x85)x2	1781	1918

#### "H" PATTERN

120 DIA. HOLES ON .375 x .375 CENTERS

SIZE WIDTH & LENGTH	NO. OF HOLES	XXXP NATURAL CAT. NO.
<b>.062 THICK (1/16")</b>		
2.25 x 8.25	6 x 22	1744
4.13 x 8.25	11 x 22	1782
4.13 x 16.50	11 x 44	1745
<b>.093 THICK (3/32")</b>		
2.25 x 8.25	6 x 22	1747
4.13 x 8.25	11 x 22	1783
4.13 x 16.50	11 x 44	1748
6.00 x 8.25	16 x 22	1941
8.25 x 8.25	22 x 22	1943
8.25 x 16.50	22 x 44	1939

#### TERMINALS

Terminals on this page: Brass (Mil Spec QQ-B-626) and Bright Tinned.

NOTE: When ordering Turret Terminals BE SURE TO SPECIFY Cat. No. of Terminal and add — 2 for 1/16" thick Board and — 3 for 3/32" thick Board  
i.e. 1598-2 for 1/16" thick Board and 1598-3 for 3/32" thick Board

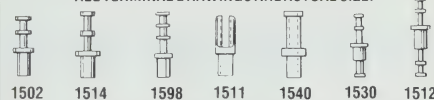
#### For Boards with .062 dia. Holes

TERMINALS: Brass (Mil Spec QQ-B-626) and Bright Tin Plated.  
ALL TERMINAL DRAWINGS ARE ACTUAL SIZE.

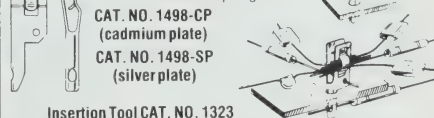


#### For Boards with .093-.100 dia. Holes

TERMINALS: Brass (Mil Spec QQ-B-626) and Bright Tin Plated.  
ALL TERMINAL DRAWINGS ARE ACTUAL SIZE.



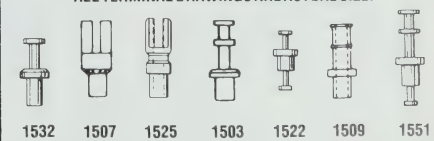
#### PUSH-INTERMEDIATE SOLDERLESS Made of Spring Steel



Insertion Tool CAT. NO. 1323

#### For Boards with .120 dia. Holes

TERMINALS  
ALL TERMINAL DRAWINGS ARE ACTUAL SIZE.



**KEYSTONE**

# EYELETS AND RIVETS

## WIDE ROLL EYELETS

Available in standard packages of 100 or 1000 pieces.

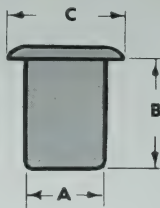
• PRECISION MADE • SOLDERABILITY RETAINED INDEFINITELY • LOW COST • FROM STOCK

Highest engineering standards maintained to produce these eyelets to uniform dimensions. Guaranteed to be within listed tolerances. A choice of most popular sizes in general use for Electronic circuitry.

**MATERIAL:** Made of BRASS

**PLATING:** BRIGHT ELECTRO TIN, MIL-F-14072. Recommended for longer shelf life and better solderability. Other platings can be furnished.

### WIDE ROLL



#### TOLERANCES:

**A** Plus or Minus .003.

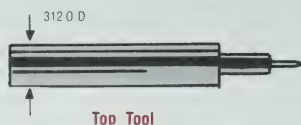
**B** Plus or Minus .008.

**C** Plus or Minus .005

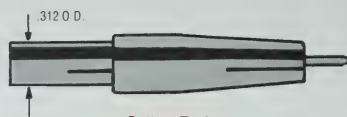
Cat No.	A Outside Diameter Barrel	B Length Under Flange	C Flange Diameter	Hole Size of Material to be Eyeleted
22		.062		
23	All Are	.093		
24	.059 O.D.	.125	All Are	.062
25		.156	.105 dia.	(1/16")
26	.045 I.D.	.187		Use Drill
27		.219		# 52
33		.093		
34	All Are	.125		
35	.089 O.D.	.156	All Are	.093
36	.070 I.D.	.187	.150 dia.	(3/32")
37		.219		Use Drill
				# 42
43		.093		
44	All Are	.125		
45	.121 O.D.	.156	All Are	.125
46	.102 I.D.	.187	.200 dia.	(1/8")
47		.219		Use Drill
48		.250		# 30

## EYELET STAKING TOOLS

Set of tools consisting of top & bottom tool.  
Made from Tool Steel and highly polished.



Top Tool



Bottom Tool

Cat. No. 3075 - For 1/16" Eyelet

Cat. No. 3076 - For 3/32" Eyelet

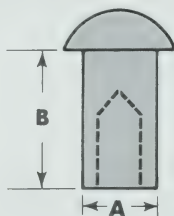
Cat. No. 3077 - For 1/8" Eyelet

## SEMI-TUBULAR BRASS RIVETS

• UNIFORM • LOWER COST • CLOSE TOLERANCES • CORROSION RESISTANT



These standardized brass rivets typify the scope and variety of popular rivets that will provide faster and stronger assemblies at lower cost. The "A" dimension includes the necessary clinch allowances but we suggest you rivet and test a sample before purchasing large quantities for your application.



#### MATERIAL:

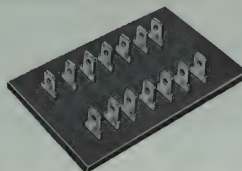
Brass, Nickel Plated

Cat. No.	"A" Shank Diam.	"B" Length Under Head	Head Diam. Tol. $\pm .005$	Hole Size of Material To Be Riveted
3381	.058	.125		.067 DIA.
3382	TO	.156	.109	USE #51
3383	.061	.187		DRILL
3384	.085	.156		.093 DIA.
3385	TO	.187	.147	USE #42
3386	.089	.218		DRILL
3387		.250		
3388	.118	.156		.128 DIA.
3389	TO	.187	.218	USE #30
3390	.123	.218		DRILL
3391		.250		

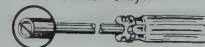


- ECONOMICAL • MAXIMUM DENSITY OF PACKAGING
- APPLICATIONS UNLIMITED • DELIVERY FROM STOCK
- MOUNT DIRECTLY TO PRINTED CIRCUIT BOARD
- MATES WITH STANDARD FEMALE CONNECTORS
- MATING TAB PORTION DESIGNED TO NEMA STANDARDS

Space saving tabs supplied from stock in sizes .110, .187, .205 and .250. Easily assembled into punched or pre-drilled holes. Create special circuitry at lowest cost on short notice.

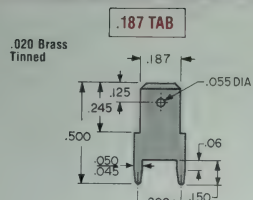


Hand Insertion Tool  
for Cat. #'s 1285, 1286  
& 1287 Only.

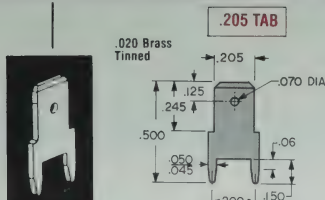


CAT. NO. 1288

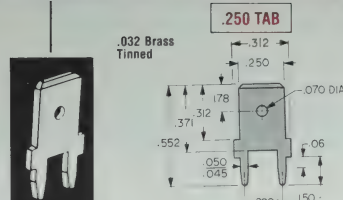
## PRINTED CIRCUIT TYPE—.110, .187, .205 and .250 TABS



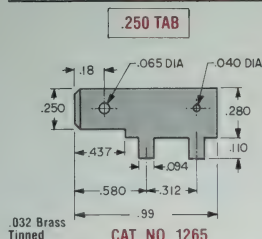
CAT. NO. 1285



CAT. NO. 1286



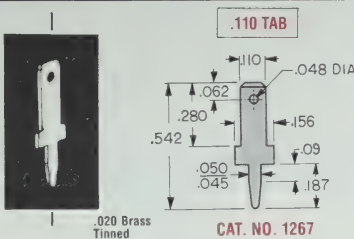
CAT. NO. 1287



CAT. NO. 1265



CAT. NO. 1266



CAT. NO. 1267

## EXTRUDED TYPE—.205 TABS (.109 Sq. EXTRUDED BASE EYELET)



CAT. NO. 1253

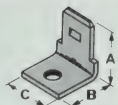


CAT. NO. 1254

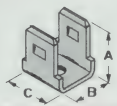


CAT. NO. 1255

## RIVET TYPE—.187 AND .250 TABS—BRIGHT BRASS PLATE



CAT. NO.	A	B	C	TAB	MAT.	HOLE
1261	.312	.250	.250	.187	.020	.099
1256	.405	.312	.312	.250	.032	.130



CAT. NO.	A	B	C	TAB	MAT.	HOLE
1262	.312	.250	.250	.187	.020	.099
1257	.405	.343	.312	.250	.032	.130

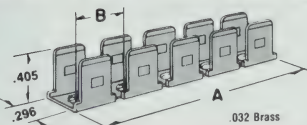


CAT. NO.	A	B	C	TAB	MAT.	HOLE
1263	.343	.375	.265	.187	.020	.135
1258	.405	.281	.312	.250	.032	.130

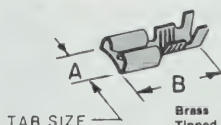
## MULTIPLE TYPE—.250 TABS

## KWIK DISCONNECT

## KWIK CONNECT

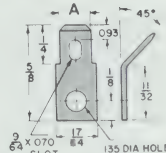


CAT. NO.	A	B	HOLE	PAIRS
1005	.703	.375	.130	2
1006	1.075	.375	.130	3
1007	1.422	.375	.130	4
1008	1.837	.375	.130	5



CAT. NO.	A	B	WIRE RANGE	MAT.
1264	.187	.576	16-22	.013
4469	.205	.640	16-20	.013
4470	.250	.750	16-20	.016

MATERIAL: .020 Brass, Tin Plated



CAT. NO.	A
4005	.205
4095	.187

PLATING SPECIFICATIONS FOR THIS PAGE:

**NICKEL PLATE:** Mil-F-14072 QQ-N-290 Type V

**HOT TINNED:** per Mil-F-14072 type 221

**CADMIUM PLATE:** per QQ-P-416C Type 2 Class 2 & clear chromate.

**BRIGHT ELECTRO TIN:** per Mil-T-10727 type 1

## TURRET TERMINALS-THREADED BASES

**CAT. NO. 1563**  
BRASS  
BRIGHT ELECTRO TIN

**CAT. NO. 1595-1**  
093  
1595-2 .125  
1595-3 .188

**CAT. NO. 1587-1**  
1587-2 .188

**CAT. NO. 1558-1**  
1558-2 .188

## BINDING POST TERMINALS (RIVET TYPE)

**CAT. NO. 1537**  
TERMINAL: Brass-Zinc Plated  
SCREW: Brass-Nickel Plated

**CAT. NO. 1535**  
TERMINAL: Brass-Zinc Plated  
SCREW: Brass-Nickel Plated

**CAT. NO. 1536**  
TERMINAL: Brass-Zinc Plated  
SCREW: Brass-Nickel Plated

## SPADE BOLTS

**Steel Zinc Plate**

CAT. NO.	A	B	Thread
1259	3/8	1 1/2	6-32
1260	3/8	1 1/2	8-32

## PRECISION STAMPED SCREW TERMINALS

**CAT. NO. 1248**  
TERMINAL: Brass-Cadmium Plated  
SCREW: Steel-Cadmium Plated

**CAT. NO. 1232**  
TERMINAL: Brass-Cadmium Plated  
SCREW: Steel-Cadmium Plated

**CAT. NO. 1209**  
TERMINAL: Brass-Hot Tin Dipped  
SCREW: Brass-Nickel Plated

**CAT. NO. 1283**  
TERMINAL: Brass-Hot Tin Dipped  
SCREW: Brass-Nickel Plated

## PRINTED CIRCUIT SCREW TERMINALS

### HORIZONTAL TYPE

**CAT. NO. 8190**  
RATING: 15A  
SCREW: 6-32 X 1/4 LG  
TERMINAL: Brass Tin plated

### VERTICAL TYPE

**CAT. NO. 8191**  
RATING: 15A  
SCREW: 6-32 X 1/4 LG  
TERMINAL: Brass Tin plated

**CAT. NO. 1215**  
TERMINAL: Brass-Cadmium Plated  
SCREW: Steel-Cadmium Plated

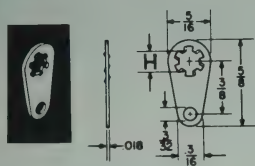
**CAT. NO. 1284**  
TERMINAL: Brass-Cadmium Plated  
SCREW: Steel-Cadmium Plated

**CAT. NO. 1273**

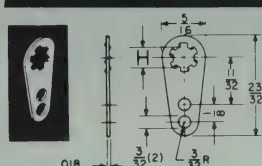
**CAT. NO. 1272**



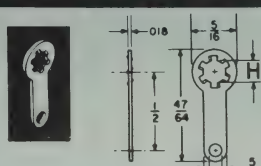
### LOCKWASHER TERMINAL LUGS .018 Brass Tinned



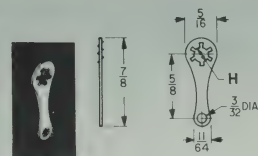
"H"  
CAT. NO. 908 (#4)  
CAT. NO. 914 (#6)  
CAT. NO. 915 (#8)



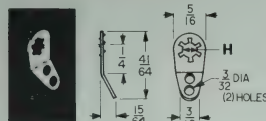
"H"  
CAT. NO. 910 (#4)  
CAT. NO. 918 (#6)  
CAT. NO. 906 (#8)



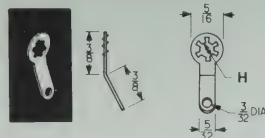
"H"  
CAT. NO. 909 (#4)  
CAT. NO. 916 (#6)  
CAT. NO. 917 (#8)



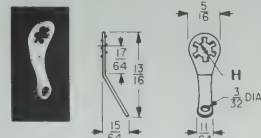
"H"  
CAT. NO. 903 (#4)  
CAT. NO. 904 (#6)  
CAT. NO. 905 (#8)



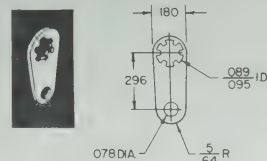
"H"  
CAT. NO. 7311 (#4)  
CAT. NO. 7312 (#6)  
CAT. NO. 7313 (#8)



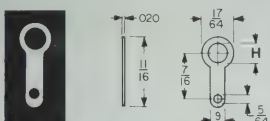
"H"  
CAT. NO. 7314 (#4)  
CAT. NO. 7315 (#6)  
CAT. NO. 7316 (#8)



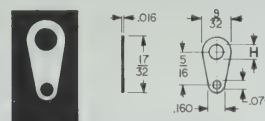
"H"  
CAT. NO. 7317 (#4)  
CAT. NO. 7318 (#6)  
CAT. NO. 7319 (#8)



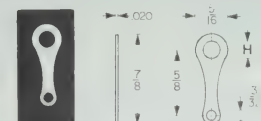
.013 BRONZE ELECTRO TIN  
CAT. NO. 907



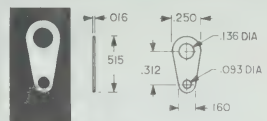
"H"  
CAT. NO. 7325 (#4)  
CAT. NO. 7326 (#6)  
CAT. NO. 7327 (#8)



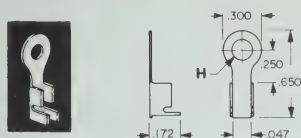
"H"  
CAT. NO. 7328 (#4)  
CAT. NO. 7329 (#6)  
CAT. NO. 7330 (#8)



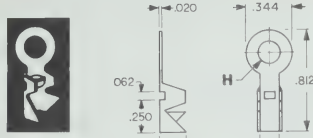
"H"  
CAT. NO. 7331 (#4)  
CAT. NO. 7332 (#6)  
CAT. NO. 7333 (#8)



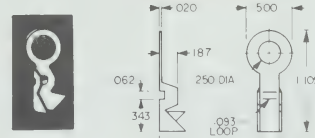
CAT. NO. 4004



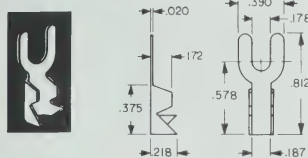
"H"  
CAT. NO. 1274 (#4)  
CAT. NO. 1275 (#6)  
CAT. NO. 1276 (#8)



"H"  
CAT. NO. 7334 (#8)  
CAT. NO. 7335 (#10)



CAT. NO. 7339



CAT. NO. 7337



"H"  
CAT. NO. 1278 (#6)  
CAT. NO. 1279 (#8)

### PRINTED CIRCUIT OR WIRE WRAP TERM.



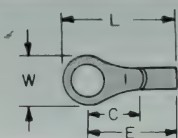
.020 BRASS TINNED

CAT. NO.	A	CAT. NO.	A
4000	500	4002	.750
4001	562	4003	1.000

Solderless terminals are made of pure electrolytic (ETP) copper annealed and tin plated. Insulation is color coded vinyl. U.L. and C.S.A. listed.

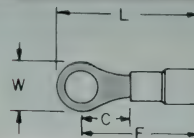
## RING TONGUE BUTTED SEAM

### NON-INSULATED



CAT. NO.	WIRE RANGE (AWG)	FOR STUD SIZE	W	C	L	E	THK	BARREL	
								LENGTH	I.D.
8200	22/18	6	.25	.22	.60	.47	.030	.25	.070
8201		8	.33	.29	.70	.54	.030	.25	.070
8202		10	.33	.29	.70	.54	.030	.25	.070
8203	16/14	6	.25	.22	.60	.47	.030	.25	.090
8204		8	.33	.29	.70	.54	.030	.25	.090
8205		10	.33	.29	.70	.54	.030	.25	.090
8206	12/10	6	.28	.29	.68	.54	.040	.25	.135
8207		8	.38	.29	.73	.54	.040	.25	.135
8208		10	.38	.29	.73	.54	.040	.25	.135

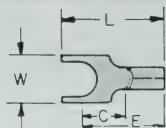
### VINYL INSULATED



CAT. NO.	WIRE RANGE (AWG)	FOR STUD SIZE	W	C	L	E	THK	BARREL		MAX. INSUL. DIA.
								LENGTH	I.D.	
8209	22/18 (Red)	6	.25	.22	.80	.67	.030	.25	.070	.145
8210		8	.33	.29	.90	.74	.030	.25	.070	.145
8211		10	.33	.29	.90	.74	.030	.25	.070	.145
8212	16/14 (Blue)	6	.25	.22	.80	.67	.030	.25	.090	.170
8213		8	.33	.29	.90	.74	.030	.25	.090	.170
8214		10	.33	.29	.90	.74	.030	.25	.090	.170
8215	12/10 (Yellow)	6	.28	.29	.98	.84	.040	.25	.135	.250
8216		8	.38	.29	1.03	.84	.040	.25	.135	.250
8217		10	.38	.29	1.03	.84	.040	.25	.135	.250

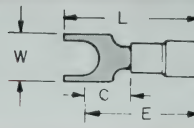
## BLOCK SPADE BUTTED SEAM

### NON-INSULATED



CAT. NO.	WIRE RANGE (AWG)	FOR STUD SIZE	W	C	L	E	THK	BARREL	
								LENGTH	I.D.
8218	22/18	6	.30	.25	.65	.50	.030	.25	.070
8219		8	.30	.25	.65	.50	.030	.25	.070
8220		10	.30	.25	.65	.50	.030	.25	.070
8221	16/14	6	.30	.25	.65	.50	.030	.25	.090
8222		8	.30	.25	.65	.50	.030	.25	.090
8223		10	.30	.25	.65	.50	.030	.25	.090
8224	12/10	6	.32	.29	.73	.54	.040	.25	.135
8225		8	.32	.29	.73	.54	.040	.25	.135
8226		10	.32	.29	.73	.54	.040	.25	.135

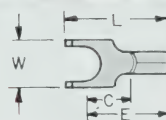
### VINYL INSULATED



CAT. NO.	WIRE RANGE (AWG)	FOR STUD SIZE	W	C	L	E	THK	BARREL		MAX. INSUL. DIA.
								LENGTH	I.D.	
8227	22/18 (Red)	6	.30	.25	.85	.70	.030	.25	.070	.145
8228		8	.30	.25	.85	.70	.030	.25	.070	.145
8229		10	.30	.25	.85	.70	.030	.25	.070	.145
8230	16/14 (Blue)	6	.30	.25	.85	.70	.030	.25	.090	.175
8231		8	.30	.25	.85	.70	.030	.25	.090	.175
8232		10	.30	.25	.85	.70	.030	.25	.090	.175
8233	12/10 (Yellow)	6	.32	.29	1.03	.84	.040	.25	.135	.255
8234		8	.32	.29	1.03	.84	.040	.25	.135	.255
8235		10	.32	.29	1.03	.84	.040	.25	.135	.255

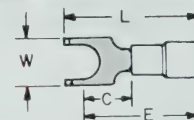
## FLANGED BLOCK SPADE BUTTED SEAM

### NON-INSULATED



CAT. NO.	WIRE RANGE (AWG)	FOR STUD SIZE	W	C	L	E	THK	BARREL	
								LENGTH	I.D.
8236	22/18	6	.30	.25	.65	.50	.030	.25	.070
8237		8	.30	.25	.65	.50	.030	.25	.070
8238		10	.30	.25	.65	.50	.030	.25	.070
8239	16/14	6	.30	.25	.65	.50	.030	.25	.090
8240		8	.30	.25	.65	.50	.030	.25	.090
8241		10	.30	.25	.65	.50	.030	.25	.090
8242	12/10	6	.32	.29	.73	.54	.040	.25	.135
8243		8	.32	.29	.73	.54	.040	.25	.135
8244		10	.32	.29	.73	.54	.040	.25	.135

### VINYL INSULATED



CAT. NO.	WIRE RANGE (AWG)	FOR STUD SIZE	W	C	L	E	THK	BARREL		MAX. INSUL. DIA.
								LENGTH	I.D.	
8245	22/18 (Red)	6	.30	.25	.85	.70	.030	.25	.070	.145
8246		8	.30	.25	.85	.70	.030	.25	.070	.145
8247		10	.30	.25	.85	.70	.030	.25	.070	.145
8248	16/14 (Blue)	6	.30	.25	.85	.70	.030	.25	.090	.170
8249		8	.30	.25	.85	.70	.030	.25	.090	.170
8250		10	.30	.25	.85	.70	.030	.25	.090	.170
8251	12/10 (Yellow)	6	.32	.29	1.03	.84	.040	.25	.135	.250
8252		8	.32	.29	1.03	.84	.040	.25	.135	.250
8253		10	.32	.29	1.03	.84	.040	.25	.135	.250



# SOLDERLESS TERMINALS

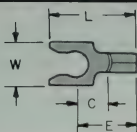
KEYSTONE



Solderless terminals are made of pure electrolytic (ETP) copper annealed and tin plated. Insulation is color coded vinyl. U.L. and C.S.A. listed.

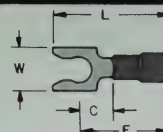
## SNAP-SPADE BUTTED SEAM

### NON-INSULATED



CAT. NO.	WIRE RANGE (AWG)	FOR STUD SIZE	W	C	L	E	THK	BARREL	
								LENGTH	I.D.
8254	22/18	6	.25	.25	.68	.50	.030	.25	.070
8255		8	.30	.25	.68	.50	.030	.25	.070
8256		10	.32	.25	.68	.50	.030	.25	.070
8257	16/14	6	.25	.25	.68	.50	.030	.25	.090
8258		8	.30	.25	.68	.50	.030	.25	.090
8259		10	.32	.25	.68	.50	.030	.25	.135
8260	12/10	6	.28	.28	.73	.53	.040	.25	.135
8261		8	.32	.28	.73	.53	.040	.25	.135
8262		10	.32	.28	.73	.53	.040	.25	.135

### VINYL INSULATED



CAT. NO.	WIRE RANGE (AWG)	FOR STUD SIZE	W	C	L	E	THK	BARREL		MAX. INSUL. DIA.
								LENGTH	I.D.	
8263	22/18 (Red)	6	.25	.25	.88	.70	.030	.25	.070	.145
8264		8	.30	.25	.88	.70	.030	.25	.070	.145
8265		10	.32	.25	.88	.70	.030	.25	.070	.145
8266	16/14 (Blue)	6	.25	.25	.88	.70	.030	.25	.090	.170
8267		8	.30	.25	.88	.70	.030	.25	.090	.170
8268		10	.32	.25	.88	.70	.030	.25	.090	.170
8269	12/10 (Yellow)	6	.28	.28	1.03	.83	.040	.25	.135	.250
8270		8	.32	.28	1.03	.83	.040	.25	.135	.250
8271		10	.32	.28	1.03	.83	.040	.25	.135	.250

## QUICK SLIDE BUTTED SEAM

### FEMALE NON-INSULATED



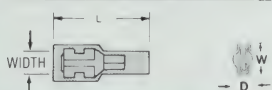
CAT. NO.	WIRE RANGE (AWG)	MATES WITH MALE TAB		L	BARREL	
		WIDTH × THK			LENGTH	I.D.
8272	22 / 18	.187 × .020		.58	.25	.085
8273		.250 × .032		.66	.25	.080
8274	16 / 14	.187 × .020		.58	.25	.085
8275		.250 × .032		.66	.25	.080

### MALE NON-INSULATED



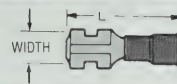
CAT. NO.	WIRE RANGE (AWG)	MALE TAB		L	BARREL	
		WIDTH x THK			LENGTH	I.D.
8281	22/18	.187 x .020		.64	.24	.080
8282		.250 x .032		.73	.25	.065
8283	16/14	.187 x .020		.64	.24	.080
8284		.250 x .032		.73	.25	.085
8285	12/10	.250 x .032		.75	.25	.150

### FEMALE FULLY INSULATED NYLON



CAT. NO.	WIRE RANGE (AWG)	MATES WITH MALE TAB	L	W	D	BARREL		MAX. INSUL. DIA.
		WIDTH × THK				LENGTH	I.D.	
8291	22/18 (Red)	.187 × .020	.81	.30	.23	.25	.085	.145
8292		.250 × .032	.87	.37	.23	.25	.080	.145
8293	16/14 (Blue)	.187 × .020	.81	.30	.23	.25	.085	.145
8294		.250 × .032	.87	.37	.23	.25	.080	.170
8295	12/10 (Yellow)	.250 × .032	.99	.39	.32	.25	.165	.250

### FEMALE VINYL INSULATED



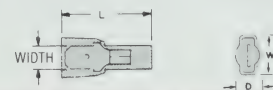
CAT. NO.	WIRE RANGE (AWG)	MATES WITH MALE TAB	L	BARREL		MAX. INSUL. DIA.
		WIDTH × THK		LENGTH	I.D.	
8276	22/18	.187 × .020	.78	.25	.085	.145
8277	(Red)	.250 × .032	.87	.25	.080	.145
8278	16/14	.187 × .020	.78	.25	.085	.145
8279	(Blue)	.250 × .032	.87	.25	.080	.145
8280	12/10 (Yellow)	.250 × .032	.96	.25	.165	.250

### MALE VINYL INSULATED



CAT. NO.	WIRE RANGE (AWG)	MALE TAB		L	BARREL		MAX. INSUL. DIA.
		WIDTH × THK			LENGTH	I.D.	
8286	22/18 (Red)	.187 × .020		.85	.24	.080	.145
8287		.250 × .032		.93	.25	.065	.145
8288		.187 × .020		.85	.24	.080	.145
8289	16/14 (Blue)	.250 × .032		.93	.25	.085	.170
8290		.250 × .032		1.05	.25	.150	.250

### MALE FULLY INSULATED NYLON



CAT. NO.	WIRE RANGE (AWG)	MALE TAB		L	W	D	BARREL		MAX. INSUL DIA.
		WIDTH × THK					LENGTH	I.D.	
8296	22/18 (Red)	.187 × .020		.87	.37	.30	.24	.080	.145
8297		.250 × .032		.95	.44	.30	.25	.065	.145
8298	16/14 (Blue)	.187 × .020		.87	.37	.30	.24	.080	.170
8299		.250 × .032		.95	.44	.30	.25	.085	.170
8300	12/10 (Yellow)	.250 × .032		1.05	.47	.39	.25	.150	.250



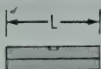
KEYSTONE

# CONNECTORS & CARD EJECTORS

Solderless terminals are made of pure electrolytic (ETP) copper annealed and tin plated. Insulation is color coded vinyl. U.L. and C.S.A. listed.

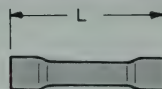
## BUTT CONNECTOR BUTTED SEAM

### NON-INSULATED



CAT. NO.	WIRE RANGE (AWG)	L	THK	BARREL	
				LENGTH	I.D.
8301	22/18	.56	.030	.25	.070
8302	16/14	.56	.030	.25	.090
8303	12/10	.56	.040	.25	.135

### VINYL INSULATED



CAT. NO.	WIRE RANGE (AWG)	L	THK	BARREL		MAX. INSUL. DIA.
				LENGTH	I.D.	
8304	22/18 (Red)	1.02	.030	.25	.070	.145
8305	16/14 (Blue)	1.02	.030	.25	.090	.170
8306	12/10 (Yellow)	1.05	.040	.25	.135	.250

## CLOSED END CONNECTOR

### NYLON INSULATED



CAT. NO.	WIRE RANGE (AWG)	L	BARREL	
			LENGTH	I.D.
8307	22/14	.61	.31	.091
8308	18/10	.85	.34	.152

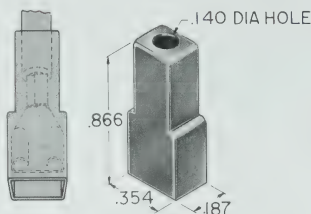
## MOLDED VINYL PLASTIC BOOT

FOR .250 KWIK DISCONNECT TERMINALS

- Molded Vinyl • No Assembly Tools Required • Insulated and Protects
- Faster Assembly • Easily Slips Over Terminal

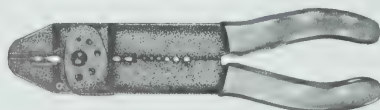
Available in the following colors:

CAT. NO.	COLORS
4471	CLEAR
4472	RED
4473	BLUE
4474	YELLOW



## VERSATILE HAND CRIMPER

High quality combination hand tool designed to crimp all terminals and connectors in the 22-10 AWG wire range both non-insulated and insulated. Has a wire cutter up front, strips 22-10 AWG wire and has a built in bolt cutter for #4 to #10 threads. A soft cushion grip handle makes it easy and comfortable to use.



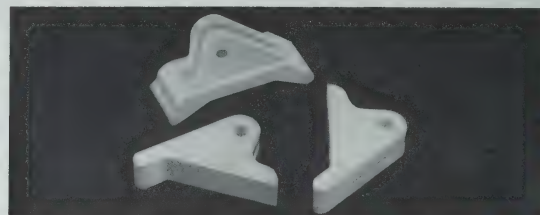
CAT. NO. 1345

## LEVER ACTION CARD EJECTORS

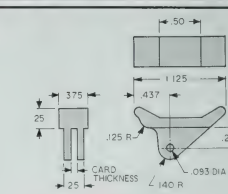
Designed for 1/16" P.C. Cards. Lever action aids in the insertion and extraction of P.C. Cards. Supplied with stainless steel spring pin.

**MATERIAL:** White Nylon 6/6, U.L. Rating 94V-2.

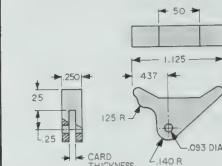
**MARKING:** For coding Circuit Boards, Card Ejectors can be hot-stamped numerically, alphabetically, or both. Quotation upon request.



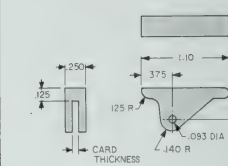
### CARD MOUNTING DIMENSIONS



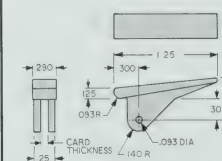
CAT. NO. 8640



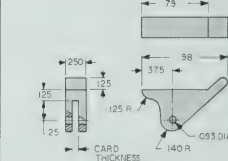
CAT. NO. 8641



CAT. NO. 8642



CAT. NO. 8643



CAT. NO. 8644



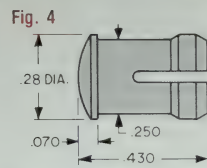
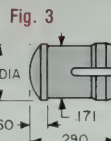
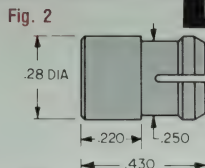
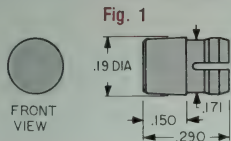
## LED LENS CAPS FOR T1 and T1 3/4 LEDs

Less expensive than indicator light assemblies and comparable in appearance. These economical Lens Caps snap-mount through the front panel for easy installation. Holes do not require chamfering. The LED is inserted in the cap from behind and held securely. Lens Caps protect the LED from physical damage while guarding the components from ESD up to 16KV. Features include striated lines and fresnel rings which permit up to 180° degree viewing angle with either diffused or non-diffused LED's. Provides exceptionally high contrast and visibility.

**Material:** Polycarbonate. Available in Red, Green, Yellow and Clear.



### ROUND CAPS



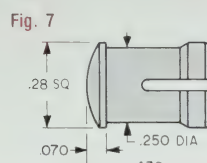
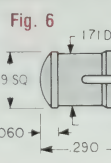
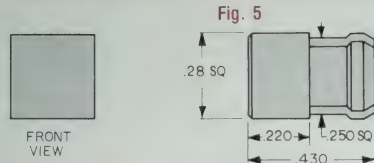
#### Standard Height

CAT. NO.	FIG. NO.	LED SIZE	COLOR	MTG. HOLE SIZE	MIN. MTG. CENTERS	PANEL THICKNESS
8650	1	T1	RED	.171	.250	.031/.062
8651	1	T1	GREEN	.171	.250	.031/.062
8652	1	T1	YELLOW	.171	.250	.031/.062
8653	1	T1	CLEAR	.171	.250	.031/.062
8662	2	T1 3/4	RED	.250	.375	.062/.125
8663	2	T1 3/4	GREEN	.250	.375	.062/.125
8664	2	T1 3/4	YELLOW	.250	.375	.062/.125
8665	2	T1 3/4	CLEAR	.250	.375	.062/.125

#### Low Profile

CAT. NO.	FIG. NO.	LED SIZE	COLOR	MTG. HOLE SIZE	MIN. MTG. CENTERS	PANEL THICKNESS
8656	3	T1	RED	.171	.250	.062/.125
8657	3	T1	GREEN	.171	.250	.062/.125
8658	3	T1	YELLOW	.171	.250	.062/.125
8659	3	T1	CLEAR	.171	.250	.062/.125
8668	4	T1 3/4	RED	.250	.375	.031/.250*
8669	4	T1 3/4	GREEN	.250	.375	.031/.250*
8670	4	T1 3/4	YELLOW	.250	.375	.031/.250*
8671	4	T1 3/4	CLEAR	.250	.375	.031/.250*

### SQUARE CAPS



#### Standard Height

CAT. NO.	FIG. NO.	LED SIZE	COLOR	MTG. HOLE SIZE	MIN. MTG. CENTERS	PANEL THICKNESS
8680	5	T1 3/4	RED	.250 Sq.	.375	.062/.125
8681	5	T1 3/4	GREEN	.250 Sq.	.375	.062/.125
8682	5	T1 3/4	YELLOW	.250 Sq.	.375	.062/.125
8683	5	T1 3/4	CLEAR	.250 Sq.	.375	.062/.125

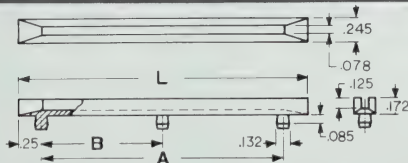
#### Low Profile

CAT. NO.	FIG. NO.	LED SIZE	COLOR	MTG. HOLE SIZE	MIN. MTG. CENTERS	PANEL THICKNESS
8674	6	T1	RED	.171	.250	.062/.125
8675	6	T1	GREEN	.171	.250	.062/.125
8676	6	T1	YELLOW	.171	.250	.062/.125
8677	6	T1	CLEAR	.171	.250	.062/.125
8686	7	T1 3/4	RED	.250	.375	.031/.250*
8687	7	T1 3/4	GREEN	.250	.375	.031/.250*
8688	7	T1 3/4	YELLOW	.250	.375	.031/.250*
8689	7	T1 3/4	CLEAR	.250	.375	.031/.250*

\*Spacer When mounting T1 3/4 Low Profile Caps (Fig. 4 or Fig. 7) in panels .125 thick or less spacer must be used. **MATERIAL:** White Nylon, 3/8 O.D. x 1/4 I.D. x 1/8 Lg. **CAT. NO.** 8692

## PRINTED CIRCUIT BOARD GUIDES

Guides may be used horizontally or vertically and snap into .125 dia. holes. Narrow width allows maximum density and optimum airflow. Simple press-fit, secure installation.



**MATERIAL:** Natural Nylon 6/6. U.L. Rating 94V-2.

CAT. NO.	"L" INCHES	"A" INCHES	"B" INCHES
8620	2.5	2.0	—
8621	3.0	2.5	—
8622	3.5	3.0	—
8623	4.0	3.5	—
8624	4.5	4.0	—
8625	5.0	4.5	—
8626	5.5	5.0	—
8627	6.0	5.5	—
8628	6.5	6.0	—
8629	7.0	6.5	—
8630	7.0	6.5	3.25
8631	7.5	7.0	—
8632	7.5	7.0	3.50
8633	8.0	7.5	—
8634	8.0	7.5	3.75
8635	8.5	8.0	—
8636	8.5	8.0	4.00

Available in .025 & .040 diameters. Precision engineered.  
Provides positive electrical contact. Current carrying capacity based on maximum voltage drop of 3 millivolts: for .025 pin, current carrying capacity, .5 amps; for .040 pin 2.0 amps.

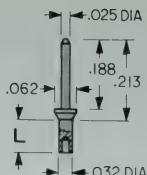
**SPECIFICATIONS:**
**BRASS:** (QQ-B-626)

**PLATING:** Gold: .000020 (MIL-G-45204 Type II)

**Tin:** .000200 to .000300 (MIL-T-10727, Type 1)  
over nickel .000100 to .000150 (QQ-N-290)

**.025 Pin**


GOLD PLATED CAT. NO.	TIN PLATED CAT. NO.	"L" Lgth.	Bd Thk.
1404-1	1424-1	.051	.032
1404-2	1424-2	.082	.062
1404-3	1424-3	.113	.093
1404-4	1424-4	.145	.125

**.025 Pin**


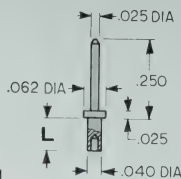
GOLD PLATED CAT. NO.	TIN PLATED CAT. NO.	"L" Lgth.	Bd Thk.
1406-1	1426-1	.047	.032
1406-2	1426-2	.078	.062
1406-3	1426-3	.110	.093
1406-4	1426-4	.141	.125

**.025 Pin**

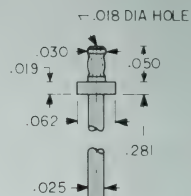

GOLD PLATED CAT. NO.	TIN PLATED CAT. NO.	"L" Lgth.	Bd Thk.
1407-1	1427-1	.051	.032
1407-2	1427-2	.082	.062
1407-3	1427-3	.113	.093
1407-4	1427-4	.145	.125

**.025 Pin**


GOLD PLATED CAT. NO.	TIN PLATED CAT. NO.	"L" Lgth.	Bd Thk.
1408-1	1428-1	.062	.032
1408-2	1428-2	.094	.062
1408-3	1428-3	.125	.093
1408-4	1428-4	.156	.125

**.025 Pin**


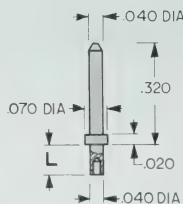
GOLD PLATED CAT. NO.	TIN PLATED CAT. NO.	"L" Lgth.	Bd Thk.
1401-1	1421-1	.065	.032

**.025 Pin**


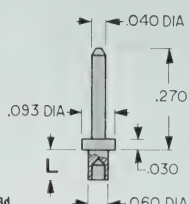
For .010 Thick Flex Circuit.  
.031 Mounting Hole

**CAT. NO. 1440**

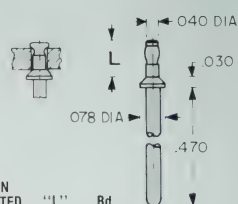
Electro-Solder Hammer Swage Mounted

**.040 Pin**


GOLD PLATED CAT. NO.	TIN PLATED CAT. NO.	"L" Lgth.	Bd Thk.
1405-1	1425-1	.051	.032
1405-2	1425-2	.082	.062
1405-3	1425-3	.113	

**.040 Pin**


GOLD PLATED CAT. NO.	TIN PLATED CAT. NO.	"L" Lgth.	Bd Thk.
1402-3	1422-3	.125	.093

**.040 Pin**


GOLD PLATED CAT. NO.	TIN PLATED CAT. NO.	"L" Lgth.	Bd Thk.
1403-1	1423-1	.080	.031
1403-2	1423-2	.110	.062

Hammer Swage Mounted

**.040 Pin**

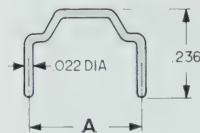
**KAY PIN FOR .040 SOCKET CONTACTS**

Made of solid Nickel Silver.  
These are force fitted into pre-drilled hole.

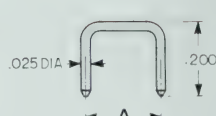
**CAT. NO. 1218**
**.040 Pin**

**TUBULAR (HOLLOW PIN) FOR .040 SOCKET CONTACTS**

Made of Brass, Electro Tinned  
These are staked to 1/16" thick insulator.

**CAT. NO. 1219**
**.022 Dia. Shorting Plug**


GOLD PLATED CAT. NO.	TIN PLATED CAT. NO.	"A" CENTERS
1409-1	1429-1	.300
1409-2	1429-2	.400

**.025 Dia. Shorting Plug**


GOLD PLATED CAT. NO.	TIN PLATED CAT. NO.	"A" CENTERS
1410-1	1430-1	.200
1410-2	1430-2	.250
1410-3	1430-3	.300
1410-4	1430-4	.400
1410-5	1430-5	.500



# MICRO JACKS

KEYSTONE



Closed Entry. Beryllium copper spring maintains retention after numerous insertions. Ideal for mounting transistors, resistors, diodes, I.C.'s and other miniature components. Designed for tight space-saving applications for both conventional and printed circuit boards. Easy removal and replacement for module repair purposes.

## SPECIFICATIONS:

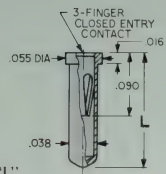
**BODY:** Brass (QQ-B-626)

**SPRING:** Beryllium Copper (QQ-C-533)

**PLATING:** Gold: 000020 (MIL-G-45204 Type II)

Tin: .000200 to .000300 (MIL-T-10727, Type 1)  
over nickel .000100 to .000150 (QQ-N-290)

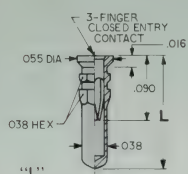
### For .015 - .021 Pin



GOLD PLATED CAT. NO.	TIN PLATED CAT. NO.	"L" Lgth.
1411-1	1431-1	.140
1411-2	1431-2	.170

**SOLDER MOUNT MOUNTING HOLE .040 DIA.**

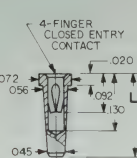
### For .015 - .021 Pin



GOLD PLATED CAT. NO.	TIN PLATED CAT. NO.	"L" Lgth.
1412-1	1432-1	.140
1412-2	1432-2	.170
1412-3	1432-2	.282

**PRESS-FIT MOUNTING HOLE .040 DIA.**

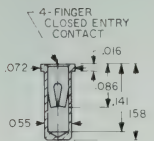
### For .020 - .025 Pin



GOLD PLATED CAT. NO.	TIN PLATED CAT. NO.	"L" Lgth.
1415-1	1435-1	.160
1415-2	1435-2	.190

**TAPER-FIT MOUNTING HOLE .055 DIA.**

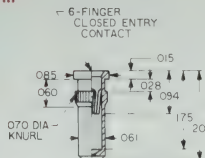
### For .020 - .025 Pin



CAT. NO. 1413 Gold Plated  
CAT. NO. 1433 Tin Plated

**SOLDER MOUNT MOUNTING HOLE .057 DIA.**

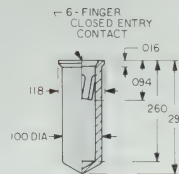
### For .022 - .034 Pin



CAT. NO. 1416 Gold Plated  
CAT. NO. 1436 Tin Plated

**PRESS-FIT MOUNTING HOLE .067 DIA.**

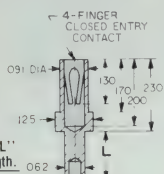
### For .038 - .052 Pin



CAT. NO. 1418 Gold Plated  
CAT. NO. 1438 Tin Plated

**SOLDER MOUNT MOUNTING HOLE .102 DIA.**

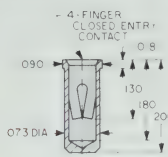
### For .032 - .046 Pin



GOLD PLATED CAT. NO.	TIN PLATED CAT. NO.	"L" Lgth.
1419-1	1439-1	.062
1419-2	1439-2	.094
1419-3	1439-3	.125
1419-4	1439-4	.156

**SWAGE MOUNT MOUNTING HOLE .067 DIA.**

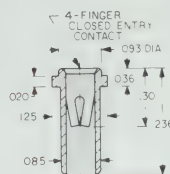
### For .032 - .046 Pin



CAT. NO. 1417 Gold Plated  
CAT. NO. 1437 Tin Plated

**SOLDER MOUNT MOUNTING HOLE .076 DIA.**

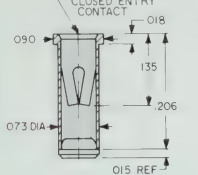
### For .032 - .046 Pin



CAT. NO. 1414 Gold Plated  
CAT. NO. 1434 Tin Plated

**SOLDER MOUNT MOUNTING HOLE .089 DIA.**

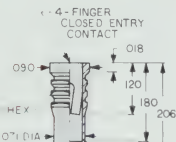
### For .032 - .046 Pin



CAT. NO. 1441 Gold Plated  
CAT. NO. 1444 Tin Plated

**SOLDER MOUNT MOUNTING HOLE .076 DIA.**

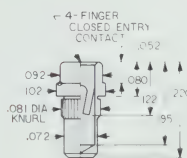
### For .032 - .046 Pin



CAT. NO. 1442 Gold Plated  
CAT. NO. 1445 Tin Plated

**PRESS-FIT MOUNTING HOLE .076 DIA.**

### For .032 - .046 Pin



CAT. NO. 1443 Gold Plated  
CAT. NO. 1446 Tin Plated

**PRESS-FIT MOUNTING HOLE .078 DIA.**

### I.C. SOCKET CONTACTS For .016 - .022 Leads

Retains .016 to .022 Dia. Leads.  
4 Finger Contacts.



CAT. NO. 3501 Gold Plated  
CAT. NO. 3505 Tin Plated

**PRESS-FIT MOUNTING HOLE .055 DIA.**

### I.C. SOCKET CONTACTS For .016 - .022 Leads

Retains .016 to .022 Dia. Leads.  
4 Finger Contacts.



CAT. NO. 3502 Gold Plated  
CAT. NO. 3506 Tin Plated

**PRESS-FIT MOUNTING HOLE .055 DIA.**

### I.C. SOCKET CONTACTS For .016 - .022 Leads

Retains .016 to .022 Dia. Leads.  
4 Finger Contacts.



CAT. NO. 3503 Gold Plated  
CAT. NO. 3507 Tin Plated

**PRESS-FIT MOUNTING HOLE .055 DIA.**



**KEYSTONE**

# ILLUSTRATED TERMINAL INDEX

**Standardize with KEYSTONE terminals:** We have supplied these precision made terminals to government agencies and industrial users for over twenty years.

**MATERIAL:** Machined of free cutting 1/2 hard BRASS per Mil-QQ-B-626. Comp. 22. 1/2 hard.

**TOOLING:** Individual sets of staking tools and kits of tools available from stock.

**TOLERANCES:** Decimals—DO NOT EXCEED plus or minus .005.

**PLATING:** Terminals are stocked in **Bright Electro-Tin Plate** per Mil-T-10727 Type 1. Economical, excellent conductivity, solderability and shelf life. Other platings available such as **Silver, Gold, Electro-Tin, Hot Tin Dip** on special request only. Prompt quotations rendered.

**SPECIAL TERMINALS:** Made to your exacting specifications, platings and tolerances. Prompt quotations rendered.

**CUSTOM-BUILT BOARDS:** We are specialists in the assembly of terminals, eyelets, clips and special hardware. Submit your drawings and prompt quotation will be rendered.

## ALL ILLUSTRATIONS ARE ACTUAL SIZE

1508	1528	1572	1520	1532	1593	1573	1502	1504	1514	1503	1505
1585	1598	1543	1527	1584	1562	1559	1519	1554	1553	1540	1538
1539	1582	1509	1541	1599	1506	1577	1515	1533	1526	1592	1510
1511	1588	1578	1525	1507	1557	1524	1523	1531	1594	1634	1633
1574	1522	1586	1501	1602	1613	1575	1521	1530	1542	1534	1551
1583	1552	1512	1576	1545	1529	1580	1550	1579	1581	1631	1632

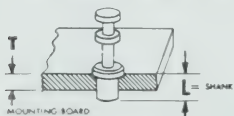
## DETAILED DIMENSIONAL DRAWINGS ON THE FOLLOWING PAGES

\* On Special Order Only

## ORDERING INFORMATION:

### TERMINALS

Specify catalog number of terminal selected and add the dash number or mention the thickness of the insulator to be used. for example: 1503-1 for 1.32" insulator, 1503-2 for 1/16" insulator etc.



- 1 for insulating board 1/32" thick
- 2 for insulating board 1/16" thick
- 3 for insulating board 3/32" thick
- 4 for insulating board 1/8" thick

## STAKING TOOLS

Catalog No. TL-series designates a set of tools, consisting of **TOP (staking)** and **BOTTOM (holder)**. Some sets of tools can be used for other terminals with similar dimensions. Tools are made of 1/4" dia. steel and **cadmium plated**. **Precision Machined** and carefully **hardened** to insure **long wear**.

NOTE: Where tools are not listed they are available on special order only.





### STAKING TOOLS AND STAKING TOOL KITS PAGES 70, 71

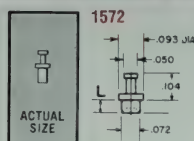
#### SINGLE, DOUBLE & THREE TURRET SERIES



CAT. NO.	L	T	STAKING TOOLS
1508-1	.053	1/32	No. TL-1
1508-2	.084	1/16	
1508-3	.115	3/32	
1508-4	.147	1/8	



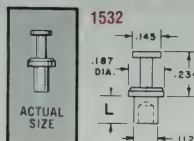
CAT. NO.	L	T	STAKING TOOLS
1528-1	.051	1/32	No. TL-1
1528-2	.082	1/16	
1528-3	.113	3/32	Special Order
1528-4	.145	1/8	



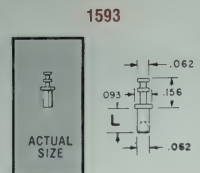
CAT. NO.	L	T	STAKING TOOLS
1572-1	.051	1/32	No. TL-1
1572-2	.082	1/16	
1572-3	.113	3/32	
1572-4	.145	1/8	



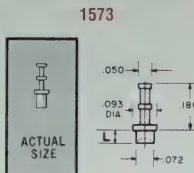
CAT. NO.	L	T	STAKING TOOLS
1520-1	.078	1/32	No. TL-2
1520-2	.109	1/16	
1520-3	.141	3/32	
1520-4	.172	1/8	



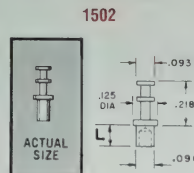
CAT. NO.	L	T	STAKING TOOLS
1532-1	.078	1/32	No. TL-8
1532-2	.109	1/16	
1532-3	.141	3/32	
1532-4	.172	1/8	



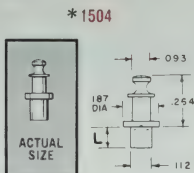
CAT. NO.	L	T	STAKING TOOLS
1593-1	.054	1/32	No. TL-1
1593-2	.084	1/16	
1593-3	.115	3/32	
1593-4	.147	1/8	



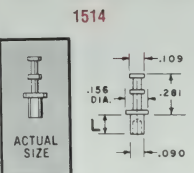
CAT. NO.	L	T	STAKING TOOLS
1573-1	.051	1/32	No. TL-1
1573-2	.082	1/16	
1573-3	.113	3/32	
1573-4	.145	1/8	



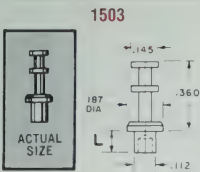
CAT. NO.	L	T	STAKING TOOLS
1502-1	.078	1/32	No. TL-2
1502-2	.109	1/16	
1502-3	.141	3/32	
1502-4	.172	1/8	



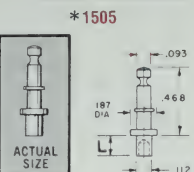
CAT. NO.	L	T	STAKING TOOLS
*1504-1	.078	1/32	No. TL-8
*1504-2	.109	1/16	
*1504-3	.141	3/32	
*1504-4	.172	1/8	



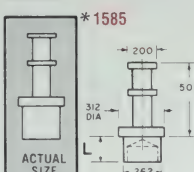
CAT. NO.	L	T	STAKING TOOLS
1514-1	.078	1/32	No. TL-5
1514-2	.109	1/16	
1514-3	.141	3/32	
1514-4	.172	1/8	



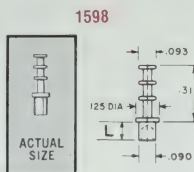
CAT. NO.	L	T	STAKING TOOLS
1503-1	.078	1/32	No. TL-8
1503-2	.109	1/16	
1503-3	.141	3/32	
1503-4	.172	1/8	
1503-5	.234	3/16	
1503-6	.297	1/4	



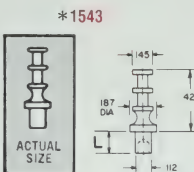
CAT. NO.	L	T	STAKING TOOLS
*1505-1	.078	1/32	No. TL-8
*1505-2	.109	1/16	
*1505-3	.141	3/32	
*1505-4	.172	1/8	



CAT. NO.	L	T	STAKING TOOLS
*1585-1	.109	1/16	Special Order
*1585-2	.141	3/32	
*1585-3	.172	1/8	

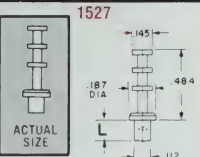


CAT. NO.	L	T	STAKING TOOLS
1598-1	.062	1/32	No. TL-2
1598-2	.094	1/16	
1598-3	.125	3/32	
1598-4	.156	1/8	

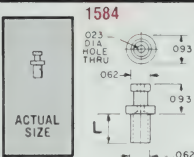


CAT. NO.	L	T	STAKING TOOLS
*1543-1	.078	1/32	No. TL-8
*1543-2	.109	1/16	
*1543-3	.141	3/32	
*1543-4	.172	1/8	

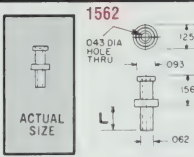
#### TUBULAR TERMINAL SERIES (HOLLOW)



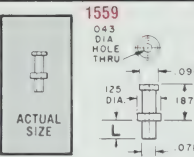
CAT. NO.	L	T	STAKING TOOLS
1527-1	.078	1/32	No. TL-8
1527-2	.109	1/16	
1527-3	.141	3/32	
1527-4	.172	1/8	



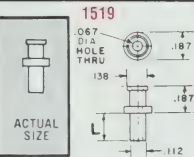
CAT. NO.	L	T	STAKING TOOLS
1584-1	.053	1/32	No. TL-1
1584-2	.084	1/16	
1584-3	.115	3/32	



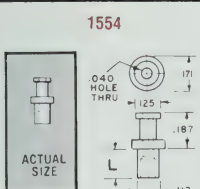
CAT. NO.	L	T	STAKING TOOLS
1562-1	.054	1/32	No. TL-2
1562-2	.084	1/16	
1562-3	.115	3/32	
1562-4	.147	1/8	



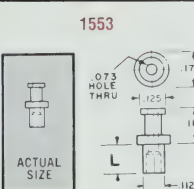
CAT. NO.	L	T	STAKING TOOLS
1559-1	.062	1/32	No. TL-2
1559-2	.094	1/16	
1559-3	.125	3/32	
1559-4	.156	1/8	



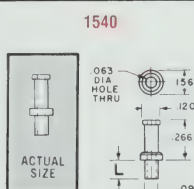
CAT. NO.	L	T	STAKING TOOLS
1519-1	.078	1/32	No. TL-8
1519-2	.109	1/16	
1519-3	.141	3/32	
1519-4	.172	1/8	



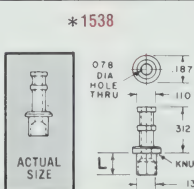
CAT. NO.	L	T	STAKING TOOLS
1554-1	.078	1/32	No. TL-8
1554-2	.109	1/16	
1554-3	.141	3/32	
1554-4	.172	1/8	



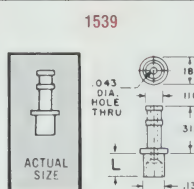
CAT. NO.	L	T	STAKING TOOLS
1553-1	.078	1/32	No. TL-8
1553-2	.109	1/16	
1553-3	.141	3/32	
1553-4	.172	1/8	



CAT. NO.	L	T	STAKING TOOLS
1540-1	.109	1/16	No. TL-5
1540-2	.141	3/32	
1540-3	.172	1/8	



CAT. NO.	L	T	STAKING TOOLS
1538-1	.078	1/32	No. TL-8
1538-2	.109	1/16	
1538-3	.141	3/32	
1538-4	.172	1/8	




CAT. NO.	L	T	STAKING TOOLS
1539-1	.078	1/32	No. TL-8
1539-2	.109	1/16	
1539-3	.141	3/32	
1539-4	.172	1/8	

\*Parts asterisked serve special applications and may not always be in stock for immediate shipment. It is necessary to manufacture these parts to special order only

## STAKING TOOLS AND STAKING TOOL KITS PAGES 70, 71

### TUBULAR TERMINAL SERIES (HOLLOW)

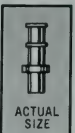
#### 1582



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
1582-1	.075	1/32	TL-5
1582-2	.105	1/16	
1582-3	.135	3/32	
1582-4	.165	1/8	

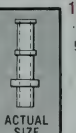
#### 1509



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
1509-1	.078	1/32	TL-8
1509-2	.109	1/16	
1509-3	.141	3/32	
1509-4	.172	1/8	
1509-5	.234	3/16	
1509-8	.297	1/4	

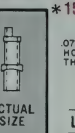
#### 1541



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
1541-2	.109	1/16	TL-8
1541-3	.141	3/32	
1541-4	.172	1/8	

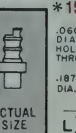
#### \*1599



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
*1599-2	.109	1/16	TL-8
*1599-3	.141	3/32	
*1599-4	.172	1/8	

#### \*1506

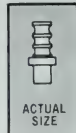


ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
*1506-1	.078	1/32	TL-8
*1506-2	.109	1/16	
*1506-3	.141	3/32	
*1506-4	.172	1/8	

### SPLIT TYPE TERMINAL SERIES

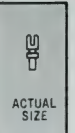
#### \*1577



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
*1577-2	.109	1/16	TL-8
*1577-3	.141	3/32	
*1577-4	.172	1/8	

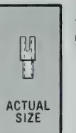
#### 1515



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
1515-1	.051	1/32	Special Order
1515-2	.082	1/16	
1515-3	.113	1/32	
1515-4	.145	1/8	

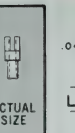
#### 1533



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
1533-1	.054	1/32	Special Order
1533-2	.084	1/16	
1533-3	.115	3/32	
1533-4	.147	1/8	


#### 1526



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
1526-1	.054	1/32	TL-3
1526-2	.084	1/16	
1526-3	.115	3/32	
1526-4	.147	1/8	


#### 1592



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
1592-1	.051	1/32	TL-2
1592-2	.082	1/16	
1592-3	.113	3/32	
1592-4	.145	1/8	


#### 1510



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
1510-1	.078	1/32	TL-9
1510-2	.109	1/16	
1510-3	.141	3/32	
1510-4	.172	1/8	

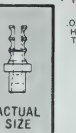
#### 1511



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
1511-1	.078	1/32	TL-3
1511-2	.109	1/16	
1511-3	.141	3/32	
1511-4	.172	1/8	

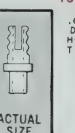
#### \*1588



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
*1588-1	.078	1/32	TL-8
*1588-2	.109	1/16	
*1588-3	.141	3/32	
*1588-4	.172	1/8	


#### 1578



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
1578-1	.078	1/32	TL-8
1578-2	.109	1/16	
1578-3	.141	3/32	
1578-4	.172	1/8	


#### 1525



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
1525-2	.109	1/16	TL-9
1525-3	.141	3/32	
1525-4	.172	1/8	


#### 1507



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
1507-1	.078	1/32	TL-9
1507-2	.109	1/16	
1507-3	.141	3/32	
1507-4	.172	1/8	

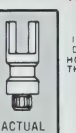
#### 1557



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
1557-2	.109	1/16	Special Order
1557-3	.141	3/32	
1557-4	.172	1/8	


#### \*1524



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
*1524-2	.109	1/16	Special Order
*1524-3	.141	3/32	
*1524-4	.172	1/8	


#### \*1523



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
*1523-3	.141	3/32	Special Order
*1523-4	.172	1/8	

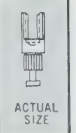
#### \*1531



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
*1531-1	.062	1/32	Special Order
*1531-2	.094	1/16	
*1531-3	.125	3/32	
*1531-4	.156	1/8	

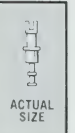
#### \*1594



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
*1594-2	.105	1/16	TL-10
*1594-3	.135	3/32	
*1594-4	.165	1/8	


#### 1634



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
1634-2	.105	1/16	TL-10
1634-3	.135	3/32	
1634-4	.165	1/8	


#### \*1610



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
*1610-2	.094	1/16	Special Order
*1610-3	.125	3/32	
*1610-4	.156	1/8	

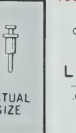
#### \*1611



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
*1611-2	.094	1/16	Special Order
*1611-3	.125	3/32	
*1611-4	.156	1/8	

#### 1633



ACTUAL SIZE

CAT. NO.	L	T	STAKING TOOLS NO.
*1633-1	.051	1/32	Special Order
*1633-2	.082	1/16	
*1633-3	.113	3/32	
*1633-4	.147	1/8	

\* Parts asterisked serve special applications and may not always be in stock for immediate shipment. It is necessary to manufacture these parts to special order only.



### STAKING TOOLS AND STAKING TOOL KITS PAGES 70, 71

#### DOUBLE-END TERMINAL SERIES

1574

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
1574-1	.051	1/32	TL-4
1574-2	.082	1/16	
1574-3	.113	3/32	
1574-4	.145	1/8	

1522

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
1522-1	.062	1/32	TL-11
1522-2	.094	1/16	
1522-3	.125	3/32	
1522-4	.156	1/8	

\*1586

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
*1586-1	.075	1/32	TL-10
*1586-2	.105	1/16	
*1586-3	.135	3/32	
*1586-4	.165	1/8	

\*1501

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
*1501-1	.078	1/32	TL-15
*1501-2	.109	1/16	
*1501-3	.141	3/32	
*1501-4	.172	1/8	

\*1602

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
*1602-1	.062	1/32	Special Order
*1602-2	.094	1/16	
*1602-3	.125	3/32	
*1602-4	.156	1/8	

1613

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
1613-1	.051	1/32	TL-4
1613-2	.082	1/16	
1613-3	.113	3/32	
1613-4	.145	1/8	

1575

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
1575-1	.051	1/32	TL-4
1575-2	.082	1/16	
1575-3	.113	3/32	
1575-4	.145	1/8	

1521

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
1521-1	.062	1/32	TL-18
1521-2	.094	1/16	
1521-3	.125	3/32	
1521-4	.156	1/8	

1530

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
1530-1	.062	1/32	TL-6
1530-2	.094	1/16	
1530-3	.125	3/32	
1530-4	.156	1/8	

1542

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
1542-1	.075	1/32	TL-11
1542-2	.105	1/16	
1542-3	.135	3/32	
1542-4	.165	1/8	

\*1534

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
*1534-1	.062	1/32	Special Order
*1534-2	.094	1/16	
*1534-3	.125	3/32	
*1534-4	.156	1/8	

1551

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
1551-1	.105	1/16	TL-12
1551-2	.135	3/32	
1551-4	.165	1/8	

\*1552

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
*1552-1	.109	1/16	TL-15
*1552-2	.141	3/32	
*1552-4	.172	1/8	

1583

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
1583-1	.051	1/32	TL-4
1583-2	.082	1/16	
1583-3	.113	3/32	
1583-4	.145	1/8	

1512

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
1512-1	.062	1/32	TL-6
1512-2	.094	1/16	
1512-3	.125	3/32	
1512-4	.156	1/8	

1576

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
1576-1	.075	1/32	TL-10
1576-2	.105	1/16	
1576-3	.135	3/32	
1576-4	.165	1/8	

1545

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
1545-1	.105	1/16	TL-12
1545-2	.135	3/32	
1545-4	.165	1/8	

\*1529

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
*1529-1	.094	1/16	Special Order
*1529-2	.125	3/32	
*1529-4	.156	1/8	
*1529-6	.219	3/16	

1518

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
1518-1	.094	1/16	Special Order
1518-3	.125	3/32	
1518-4	.156	1/8	

1580

ACTUAL SIZE

CAT. NO.	L	T	Staking Tools No.
1580-1	.078	1/32	Special Order
1580-2	.109	1/16	
1580-3	.141	3/32	
1580-4	.172	1/8	

#### TAPER PIN AND PRINTED CIRCUIT SERIES

**\*1550**

CAT. NO.	L	T	Staking Tools No.
*1550-1	.078	1/32	TL-8
*1550-2	.109	1/16	
*1550-3	.141	3/32	
*1550-4	.172	1/8	

**1579**

CAT. NO.	L	T	Staking Tools No.
1579-1	.078	1/32	Special Order
1579-2	.109	1/16	
1579-3	.141	3/32	
1579-4	.172	1/8	

**1581**

CAT. NO.	L	T	Staking Tools No.
1581-1	.062	1/32	Special Order
1581-2	.094	1/16	
1581-3	.125	3/32	
1581-4	.156	1/8	

**\*1631**

CAT. NO.	L	T	Staking Tools No.
*1631-1	.062	1/32	Special Order
*1631-2	.094	1/16	
*1631-3	.125	3/32	
*1631-4	.156	1/8	

**1632**

CAT. NO.	L	T	Staking Tools No.
1632-1	.062	1/32	TL-1
1632-2	.094	1/16	
1632-3	.125	3/32	
1632-4	.156	1/8	

\*Parts asterisked serve special applications and may not always be in stock for immediate shipment. It is necessary to manufacture these parts to special order only.

## PUSH-IN TERMINALS For .062 & .093 Dia. Holes

Terminals are pressed into the holes of the board manually; or a low cost insertion tool can be supplied for use at the bench, or in an arbor or drill press.

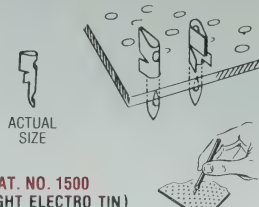
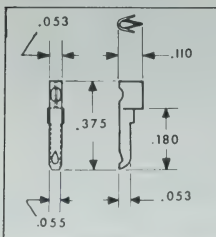
- **QUICK & EASY TO INSTALL** • **NO STAKING REQUIRED**
- **FOR PRODUCTION OR EXPERIMENTAL USE**

### "FLEA" CLIP (For .062 Dia. Holes)

For subminiature applications where conventional terminals are too large or too costly. The design engineer will find them most useful; and the serviceman will need these for quick repairs of printed circuitry. Simply insert wire thru hole and it is held firmly by spring wipe action assuring continued positive contact.

**MATERIAL:** .008 thick Beryllium Copper per QQ-C-533 and Heat Treated to 15N, 73-79.

**FINISH:** Bright Electro Tin



**CAT. NO. 1500**  
(BRIGHT ELECTRO TIN)

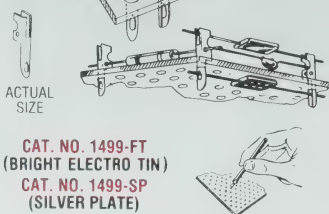
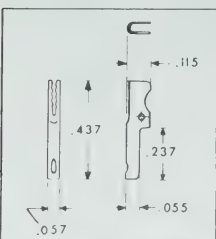
Insertion Tool Cat. No. 1322

### "IMP" TERMINAL (For .062 Dia. Holes)

The name implies the miniature characteristics of this terminal. It is only slightly larger than the "FLEA" clip. Excellent for point to point or feed thru wiring. Slot serrated to grip component leads. Multiple connections are made quick and easy.

**MATERIAL:** .008 thick Beryllium Copper.

**FINISH:** Bright Electro Tin or Silver Plate.



**CAT. NO. 1499-FT**  
(BRIGHT ELECTRO TIN)  
**CAT. NO. 1499-SP**  
(SILVER PLATE)

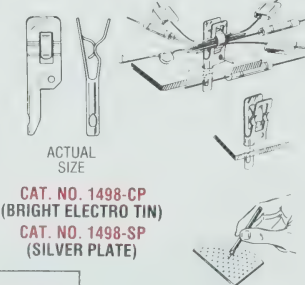
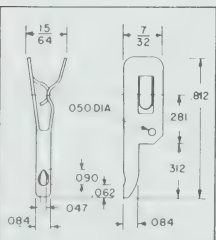
Insertion Tool Cat. No. 1322

## SOLDERLESS TERMINAL (For .093 Dia. Holes)

Our newly designed terminal for production or breadboarding use. Holds as many as 7 leads without soldering. A rugged, spring action precision stamped terminal.

**MATERIAL:** .015 Spring Steel.

**FINISH:** Cadmium Plate per QQ-P-416 Class 2, Type 2 and Clear Iridite, or Silver Plate.



**CAT. NO. 1498-CP**  
(BRIGHT ELECTRO TIN)  
**CAT. NO. 1498-SP**  
(SILVER PLATE)

Insertion Tool Cat. No. 1323

\*NOTE: See page 54 for  
.042 Dia. push-terminals CAT. NO. 1495

## MINIATURE TUBULAR TERMINALS (For .062-.067 Diam. Hole)

- **IDEAL FOR PRINTED CIRCUITRY** • **TAPERED SECTION RETAINS WIRE LEADS**
- **MOUNT TRANSISTORS, RESISTORS, NEONS**
- **POSITIVE LOCKING IN HOLE - NO STAKING REQUIRED**

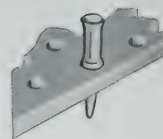
Will firmly hold a wire in range of .010 to .050 diam.

These terminals are often used for transistor and Bi-Pin lamp sockets. Terminals snap into a .062-.067 diam. hole of a 1/16" thick insulator and are firmly held without the need of staking. Wire leads can be inserted from either end and retained. Terminals 1236 and 1237 have tapered socket spring forming that will hold a number of leads in position and allow multiple dip soldering.

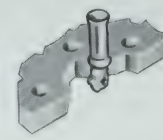
**MATERIAL:** .006 thick Brass,  
Precision Formed and Pre-Tinned.



**CAT. NO. 1236**



**CAT. NO. 1237**



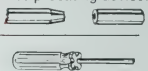
**CAT. NO. 1238**



### INSERTION TOOL FOR ABOVE

For Arbor Press or similar reciprocating device.  
Specify CAT. NO. **TL-11**

For Hand Insertion Tool.  
Specify CAT. NO. **1214**



## .025 SQUARE WIRE WRAP PINS

Completely burr free straight to within .003 per inch. Conical ends of square-wire with smooth blend-in radius on corners assures ease of insertion with minimum damage to pre-plated PCB holes, which ensures trouble free insertion into printed circuit boards or when used with plug-in terminals.

**MATERIAL:**  
Phosphor Bronze  
Tin Plated



CAT. NO.	"A" LENGTH	CAT. NO.	"A" LENGTH
5070	.400	5077	.642
5071	.440	5078	.675
5072	.515	5079	.720
5073	.535	5080	.850
5074	.600	5081	.916
5075	.615	5082	.995
5076	.625	5083	1.130





CAT. NO.	PAGE NO.	CAT. NO.	PAGE NO.	CAT. NO.	PAGE NO.	CAT. NO.	PAGE NO.	CAT. NO.	PAGE NO.	CAT. NO.	PAGE NO.	CAT. NO.	PAGE NO.	CAT. NO.	PAGE NO.
22		196	4	593	11			1253		1451B	34	1538		1615	
to }		197	4	594	11	<b>900</b>		to }	57	to }	34	to }	67	to }	21
27						901	22	1258		1451D	34	1540		1618	
33		<b>200</b>		<b>600</b>		903		1259	58	1451E	34	1541	68	1620	
to }	56					to }	59	1260	58	1452A	34	1542	69	to }	34
37		200	4	603-1		910		1261		1452B	34	1543	67	1625	
43		201	4	to }	51	914		to }	57	1452C	34	1545	69	1627	
to }	56	203P	4	603-10		to }	59	1267		1452D	34	1546	34	to }	34
48		205	4	604-1		918		1268	52	1452E	34	1547	34	1630	
58		206		to }	51			1268-10	52	1453	38	1547A	34	1631	69
to }	13	to }	10	604-10		<b>1000</b>		1268-12	52	1454A	35	1547B	34	1632	69
66		210		607-1		1005		1268-19	52	1454B	35	1547C	34	1633	68
68	11	211	13	to }	51	to }	57	1268-20	52	1454C	35	1547D	34	1634	68
69		212		607-10		1008		1268-22	52	1454D	35	1547E	34	1635	
to }	12	to }	12	609-1		1025		1268-28	52	1454E	35	1548A	34	to }	34
71		222		to }	51	to }	9	1268-38	52	1456	38	1548B	34	1639	
72		223	8	609-10		1027		1272	58	1457A	35	1548C	34	1642	34
to }	11	224	8	610				1273	58	1457B	35	1548D	34	1643	34
77		225	4	to }	41	<b>1100</b>		1274		1457C	35	1548E	34	1644	
78		226	4	627				to }	59	1457D	35	1548F	34	to }	35
to }	12	227	10	630	41	1101	6	1276		1457E	35	1549A	34	1646	
80		228	10	631	41	1103	8	1278	59	1458	38	1549B	34	1647	
83	11	261		633	41	1104	6	1279	59	1459	38	1549C	34	to }	38
86		to }	7	634	41	1105	8	1283	58	1464	38	1549D	34	1649	
to }	12	266		635	11	1107	8	1284	58	to }	38	1549E	34	1650	
91		269		636	11	1109	6	1285		1467		1550		to }	34
93		to }	7	639		1110	6	to }	57	1472	38	to }	69	1656	
99		274		to }	33	1113	3	1288		1474A	34	1552		1656A	34
				641		1116	6	1290	11	1474B	34	1553	67	1656B	34
<b>100</b>		<b>300</b>		643	33	1132	6	1290-79	11	1474C	34	1554	67	1657	34
100	12	330		645	33	1136	6	1291	11	1474D	34	1556	41	1657A	34
101	6	to }	37	647	33	1139	2	1291-79	11	1474E	34	1557	68	1657B	34
102	8	338		649	33	1142	6	1294	11	1476	25	1558	58	1660	21
104	6	340		650	33	1162	2	1295	11	1477	25	1559	67	1661	21
to }		to }	45	666		1173	2			1480		1560	34	1670	21
105		346		668	33	1175	2	<b>1300</b>		to }	35	1561	34	1671	21
107		348	45	670		1185	2	1301	71	1485		1562	67	1680	21
109		349	45	to }	33	1189	2	1302	71	1490		1563	58	1681	21
to }	6	351		674		1191	2	to }	71	to }	36	1564		1690	21
111		to }	37	676	33	1192	2	1304		1494		to }	41	1691	21
113		359		677	33	1194	2	to }		1495	54	1571		1692A	34
to }	6	360		679	33	1195	2	1307		1498CP	72	1572	67	1692B	34
118		to }	36	680	13	1198	2	1309		1498SP	72	1573	67	1692C	34
126	6	396		681		1199	2	to }	71	1499FT	72	1574		1692D	34
127	6	397		to }	33			1313		1499SP	72	to }	69	1692E	34
129		to }	38	687		<b>1200</b>		1315	70			1576			
to }	8	399		689	33	1200	21	1316	70	<b>1500</b>		1577	68	<b>1700</b>	
131				690	33	1204	52	1322	72	1500	72	1578	68		
132	6	<b>400</b>				1204-10	52	1323	72	to }	69	1579		1700	
134	6					to }	71	1324		1501	69	to }	69	to }	38
135	6	400		<b>700</b>		1204-12	52	to }		1502		1581		1702	
137	4	to }	38			1204-19	52	1326		to }	67	1582	68	1704	
138	4	403		700		to }	70	1330		1505		1583	69	to }	38
139	4	405		to }	44	1204-20	52	to }		1506	68	1584	67	1706	
139B	4	to }	38	705		1204-22	52	1339		1507	68	1585	67	1707	70
140	4	410		708	41	1204-28	52	1345	71	1508	67	1586	69	1708	
146		412		710	33	1204-38	52			1509		1587	58	to }	38
to }	7	to }	38	711		1209	58	<b>1400</b>		to }	68	1588	68	1710	
153		422		to }	33	1210	21	1401		1511		1589		1713	70
154		425		714		1214	72	to }	64	to }	69	to }	34	1714	
to }	4	to }	38	720		1215	58	1410		1512	69	1591		to }	71
156		430		to }	46	1218	64	1411		1514	67	1592	68	1717	
158	7	432		750		1219	64	to }	65	1515	68	1593	67	1719	71
161	4	to }	38	752	46	1223	21	1419		1518	69	1594	68	1721	70
163	4	438		753	46	1224	21	to }		1519	67	1595	58	1722	71
166		452	20	755		1226	21	1421		1520	67	1596	34	1723	54
to }	4	476	20	to }	46	1230	21	to }	64	1521	69	1598	67	1726	71
171				757		1231	21	1430		1522	69	1599	68	1730	55
173	4	<b>500</b>		760		1232	58	1431		1523				1731	34
173P	4			764		1236		to }	65	to }	68	<b>1600</b>		1732	55
174		500	8			to }	72	1439		1526		1600	21	1733	55
to }	4	552	20	<b>800</b>		1238		1440	64	1527	67	1601	21	1734	34
178		561	22			1239	52	1441		1528	67	1602	69	to }	55
182		565		800		1239-10	52	to }	65	1529	69	1603	34	1739	
to }	4	to }	22			1239-12	52	1446		1530	69	1604	34	1740	34
187		574		800		1239-19	52	1449	38	1531	68	1605	34	1742	55
189	4	575	20	to }	52	1239-20	52	1450	34	1532	67	1608	34	1743	34
190	4	576		873		1239-22	52	1450A	34	1533	68	1609	34	1744	55
192	4	to }	22	875		1239-28	52	1450B	34	1534	69	1610	68	1745	55
193	4	578		to }	36	1239-38	52	1450C	34	1535		1611	68	1746	34
				898		1248	58	1450E	34	to }	58	1612	34	1747	55
								1451A	34	1537		1613	69		

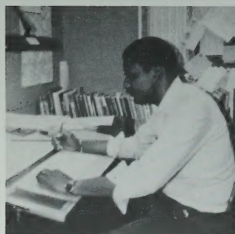


CAT. NO.	PAGE NO.	CAT. NO.	PAGE NO.	CAT. NO.	PAGE NO.	CAT. NO.	PAGE NO.	CAT. NO.	PAGE NO.	CAT. NO.	PAGE NO.	CAT. NO.	PAGE NO.	CAT. NO.	PAGE NO.
1748	55	1849		1922D	35	2139	2	3363		4200		4655		7140	
1749	34	to }	21	1922E	35	2140	2	to }	45	4225		4670	29	7151	39
1750	55	1852		1922F	35	2142	6	3370		4232	54	4671		7156	
1752	34	1853	34	1923	35	2162	2	3372	45	4234		4674		7158	
1753	55	1854	55	1923A	35	2171	2	3373	45	4241		4675	29	7162	39
1754	55	1855		1923B	35	2173		3381		4243	54	4678		7170	
1756	55	to }	34	1923C	35	to }	2	to }	56	4244		4679		to }	39
1757	55	1859		1923D	35	2176		3391		4245	31	4684	24	7181	
1758	34	1860		1923E	35	2182	2	3396		4246	30	4690	25	7186	
1759	34	to }	21	1923F	35	2184	8	3399	54	4247	30	4692		7188	
1761	34	1863		1924	35	2185		to }	2	4258		4696		7192	39
1762	55	1864		1925	35	2192		3400	54	4260		4697	24	7194	
1763	55	to }	34	1926A	34	2194	2	3402	35	4269		4698	45	7196	
1765		1867		1926B	34	2195	2	3403	35	4299	32	4699	25	to }	39
1768		1868		1926C	34	2198	2	3404		4700	25	4701	25	7200	
1770		to }	55	1926D	34	2199	2	3413	54	4702	45	4703		7203	
1774		1875		1926E	34	2201		3415		4705	25	4706	24	7210	
1775	34	1876		1927A	36	2221		3415	54	4711	45	4712	25	7212	
1776		1878		1927B	36	2222		3423		4716	25	4717	25	7214	35
1795		1881		1928A	36	to }	7	3425	54	4724		4731		7215	35
1796	34	to }	34	1928B	36	2233		3427		4732	24	4733		7222	
1797A	34	1889		1929A	36	to }		3429	35	4734		4736		7224	35
1797B	34	1891		1929B	36	2300		3438	35	4737		4738		7225	35
1797C	34	to }	34	1930A	36	2304		3457		4738		4739		7230	
1797D	34	1897		1930B	36	to }	54	3477	35	4739		4740		to }	35
1798A	34	1898	21	1931A	36	2313		3478	34	4741	24	4742		7227	
1798B	34	1899	34	1932A	36	2314	35	to }		4743		4744		7228	35
1798C	34			1932B	36	2315A	34	3498		4745		4746		7229	35
1798D	34			1932C	36	2315B	34	3501	65	4747		4748		7230	
				1933A	36	2315C	34	3503		4749		4750		7231	
				1933B	36	2315D	34	3505		4751		4752		7232	
				1934		2315E	34	3507		4753		4754		7233	
				to }	35	3000		3514	30	4755		4756		7234	
				1938		3014		3515	30	4757		4758		7235	
				1939	55	3022	21	3516P	30	4759		4760		7236	
				1902A	36	3049	45	3517	30	4761		4762		7237	
				1902B	36	3051		3518P	30	4763		4764		7238	
				1902C	36	3062	45	3519	30	4765		4766		7239	
				1902D	36	3064		3523	31	4767		4768		7240	
				1902E	36	to }	45	3524	31	4769		4770		7241	
				1902F	36	3066	45	3526	31	4771		4772		7242	
				1902G	36	3069		3529		4773		4774		7243	
				1903A	36	3075	56	3533	30	4775		4776		7244	
				1903B	36	to }		3535	30	4777		4778		7245	
				1903C	36	3077		3536	31	4779		4780		7246	
				1903D	36	3100		3543		4781		4782		7247	
				1903E	36	3101	45	4000		4783		4784		7248	
				1903F	36	to }		4000	13	4785		4786		7249	
				1903G	36	3198		4020		4787		4788		7250	
				1904A	36	3200	45	4023		4789		4790		7251	
				1904B	36	to }		4031	13	4791		4792		7252	
				1904C	36	3241		4056		4793		4794		7253	
				1904D	36	3300		4060	57	4795		4796		7254	
				1904E	36	3347	45	4095		4797		4798		7255	
				1904F	36	to }		4100		4799		4800		7256	
				1904G	36	3350		4116	53	4801		4802		7257	
				1905		3352	45	4120		4803		4804		7258	
				to }	55	to }		4147		4805		4806		7259	
				1908		3361	45	4196	53	4807		4808		7260	
				1909	35					4809		4810		7261	
				1910						4811		4812		7262	
				to }	55					4813		4814		7263	
				1918						4815		4816		7264	
				1919						4817		4818		7265	
				to }	35					4819		4820		7266	
				1921						4821		4822		7267	
				1921A	35					4823		4824		7268	
				1921B	35					4825		4826		7269	
				1921C	35					4827		4828		7270	
				1921D	35					4829		4830		7271	
				1921E	35					4831		4832		7272	
				1921F	35					4833		4834		7273	
				1922	35					4835		4836		7274	
				1922A	35					4837		4838		7275	
				1922B	35					4839		4840		7276	
				1922C	35					4841		4842		7277	
										4843		4844		7278	
										4845		4846		7279	
										4847		4848		7280	
										4849		4850		7281	
										4851		4852		7282	
										4853		4854		7283	



CAT. NO.	PAGE NO.
15256	} 49
to 15259	
15263	} 49
to 15265	
15267	} 49
to 15269	
15271	} 49
to 15279	
15287	} 49
to 15289	
15291	} 49
to 15299	
<b>15300</b>	
15301	} 50
to 15330	
15332	51
15333	51
15342	51
15343	51
<b>15400</b>	
15401	} 51
to 15415	
15431	} 50
to 15445	
<b>15500</b>	
15501	} 51
to 15515	
15531	} 50
to 15545	
<b>TL</b>	
TL-1	} 66
to TL-18	
TL-19	} 34
to TL-21	
<b>SP</b>	
SPR-8	37
SPR-13	37
SPR-34	37
<b>ST</b>	
STH-14	37
STH-19	37
STH-22	37
STR-15	37
STR-35	37

# STANDARDIZED ELECTRONIC COMPONENTS AND HARDWARE



For over 44 years, Keystone has designed and manufactured a vast array of standardized electronic components and hardware.

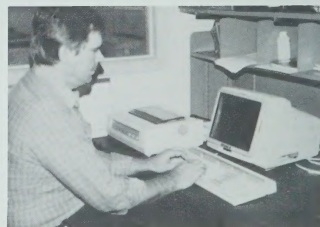
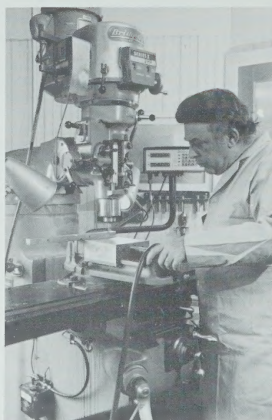
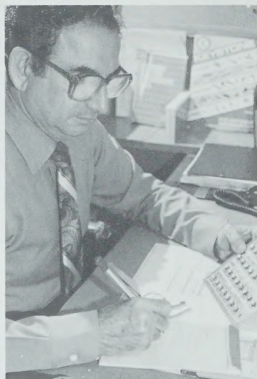
The combined resources of technical design engineering know how with undisputable manufacturing capabilities, provides you—our customer—with a limitless supply of quality products in stock and ready to ship.

Highly skilled design personnel are ready to help customers with product variances, modifications, or complete creative design.

Precision manufacturing using up-to-date equipment and detailed quality inspection enable Keystone to manufacture its inventory or custom fabricate to your needs.

Standard products listed in this catalog that cannot be used as shown, can be modified to suit your needs, or custom fabricated to your specifications.

**PROMPT QUOTATIONS RENDERED**



**KEYSTONE**  
ELECTRONICS CORP.



# CUSTOM BUILT COMPONENT PARTS AND ACCESSORIES

If Our Standardized Catalogued Items Do Not Meet  
Your Requirements; WE CAN OFFER YOU .....

**FREE DESIGN & ENGINEERING SERVICES** Applications Engineers who can assist you with cost saving methods and assemblies in the manufacture of your parts.

**MODERN FULLY EQUIPPED TOOLROOM** All the latest machinery manned by highly skilled efficient personnel, proficient in the design of Tools, Dies, Jigs and Fixtures.

**ASSEMBLY FACILITIES** Our Engineering staff designs all our tooling and automatic machinery to mass produce at the lowest cost. Our competent production staff trains our employees to assemble unique parts not suitable for automatic equipment.

**SCREW MACHINE FACILITIES** We have up to date modern machinery that will produce your screw machine parts at the lowest possible cost with the highest quality. Our secondary department is manned by highly skilled personnel to assure you of prompt delivery.

**STAMPING FACILITIES** Experienced Toolmakers and Die setters operate our large variety of small and large high speed power presses. They are adept in handling all bakelite (phenolic) materials and various metals.

**QUALITY CONTROL** Every product is carefully inspected and tested mechanically, electronically and visually before shipment to assure only quality parts leave our factory. SPC procedures employed.

**PROMPT QUOTATIONS RENDERED**







# KEYSTONE

DESIGNERS • MANUFACTURERS

STANDARDIZED ELECTRONIC COMPONENTS & HARDWARE

CAT. NO. 920



**KEYSTONE ELECTRONICS CORP.**

**31-07 20TH RD., ASTORIA, NY 11105-2017**

**TEL: (718) 956-8900 • FAX 718-956-9040**

**Keystone/Canada, 39 Glen Cameron Rd., #2 Thornhill, Ontario L3T 1P1 (416) 889-1204**